

# Technology Council Report Phase I

Lincoln, Nebraska



January 4, 2002

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# Chapter 1: Background & Executive Summary

**Executive Summary/Introduction**  
**Mayor's Technology Council**

**Background**

The City of Lincoln stands at a crossroads as we consider how to best ensure our future economic vitality. Lincoln has been blessed with decades of stable growth and prosperity, combined with a high quality of life. These circumstances have produced an optimistic, confident, some would say complacent view about the future of our local economy. Factors such as our historically low unemployment rate and stable employment base, even during times of economic downturn, as well as our steady population and job growth all contribute to our sense that a strong future is all but assured for our community.

Given this positive outlook, one option is to simply “keep doing what we’re doing” – continue our traditional approach of responding to the needs of existing businesses. Public and private economic development strategies should focus on immediate needs such as workforce development and funding for traditional infrastructure improvements such as roads, water and sewer extensions to accommodate growth.

Over the past year, however, a new school of thought has begun to emerge, one that respects the traditional approach to economic development that has served Lincoln so well but espouses the need for a far-reaching proactive approach to Lincoln’s economic future. This perspective is based on maximizing opportunities created by the “new economy” and advocates harnessing Lincoln’s unique strengths and assets to better position us for the future.

This school of thought accepts that the “new economy” is here to stay, the decline of the NASDAQ and the demise of many dot.coms notwithstanding. This new economy is knowledge-based, characterized by intellectual capital, innovation and creativity and is dependent on the rapid exchange of information. Universities, especially major research universities, are the fertile breeding ground for much of the new economy, and cities which are home to one or more institutions of higher education are especially well-positioned to succeed in this new economy.

The definition of infrastructure in the new economy includes fiber optics, cable and other technologies in addition to the traditional roads, sewer and water. A community’s quality of life becomes a major factor in its ability to grow and attract new economy businesses. Factors such as arts and culture, recreational and entertainment opportunities, availability of unique office and living space are as important as financial incentives in luring entrepreneurs and their companies to a city. Partnerships and a new approach to collaboration involving higher education, government and business are essential ingredients for success in the new economy.

These partnerships and collaborative ventures often go beyond a single community and involve regional cooperation. Instead of competing with one another, cities within a state or even a multi-state region are putting aside past rivalries in favor of fostering regional alliances to better compete nationally and internationally.

The Mayor's Technology Council (MTC) has been the forum for exploring, debating and addressing these issues within the context of how to best position Lincoln for the future. The MTC was formed by Mayor Don Wesely as an outgrowth of the Gallup decision to relocate in Omaha. Three factors cited by Gallup – limited air transportation, inadequate telecommunications infrastructure and a lack of venture capital – became the basis for three short-term task forces convened by Mayor Wesely in June 2000. The reports issued by these groups in late 2000 included a strong recommendation that the Mayor create a Technology Council to study the whole issue of technology and its long-term impact on the Lincoln economy.

## **Methodology**

Co-Chaired by Bill Johnston, Publisher of the Lincoln Journal Star, and Ed Paquette, Executive Director of the University of Nebraska Alumni Association, the Technology Council was guided by a 15-member Steering Committee listed in the Appendices of this report. What began as a narrowly focused examination of Lincoln's technology infrastructure and capacity evolved into a broader discussion of economic development and how to best position our community for the future.

Meeting minutes, handouts, studies and reports from the MTC are included in the appendices, beginning on page --. The MTC's overall approach included the following activities:

1. Consideration of other cities and regions in the United States which are demographically similar to Lincoln and our region or which have been national models in fostering successful business – higher education collaboration. This effort included presentations by outside speakers.
2. Presentation by the Nebraska Department of Economic Development on their 2001 Target Industry Study prepared by DeLoitte Touche/Fantus.
3. Identification of key industries, both traditional and new economy, which have historically done well in Lincoln or have great future potential and formation of teams of industry leaders in each of the areas. Teams were formed for the following industries and asked to prepare detailed reports on their industry sector's opportunities for growth, future needs and potential obstacles to growth:
  - Biotechnology
  - Electronics Technology
  - Health Care
  - Insurance Industry Support
  - Metal Products
  - Software Development

A seventh team focused on Quality of Life issues. Reports and recommendations from each of the teams are included in the next section of this report.

4. A citywide Technology Audit commissioned by the city and directed by the HDR firm is underway and will be complete in February 2002.
5. An employer technology infrastructure study conducted by Gallup concerning company's telecommunications service and future needs. Results will be available in January/February 2002.

## **Conclusions and Recommendations**

The MTC activities produced a range of useful information for economic development organizations, government and higher education as well as specific recommendations and conclusions in each industry area.

The MTC wishes to share several over-arching recommendations and conclusions which transcend the individual industry areas, surveys and studies.

### **1. Lincoln's future vitality can be best assured by a three-pronged approach to economic development which includes:**

**Traditional Economy** – Continuing to advance our traditional economy by responding to needs of existing businesses should remain a high priority. Issues of workforce availability and readiness are serious challenges for local employers, especially in industry areas with great future potential. Likewise, continuing to adequately plan for future growth and fund infrastructure needs should be an ongoing priority for local government and economic development organizations.

**New Economy** – As home to a major research university as well as other institutions of higher education, Lincoln is uniquely positioned to take advantage of opportunities presented by the new economy. The University of Nebraska's Technology Park has been a significant asset and UNL's increasing emphasis on technology transfer, attracting increased research dollars and initiating new programs such as the J.D. Edwards Program offer tremendous potential for business development. The Antelope Valley redevelopment area offers an ideal location for university-related business ventures or additional research facilities of the caliber of the Beadle Center.

**Regional Economy** – Building on the Nebraska Department of Economic Development's Target Industry Study, it is time to begin looking beyond the borders of our own city and consider a more regional approach to economic development. The I-80 corridor between Omaha and Lincoln and west of Lincoln presents great opportunity for coordinated planning and development. A study underway by the Joslin Institute for Sustainable Communities addresses development issues in a 60-mile radius of Omaha. The tri-city area of Grand Island, Hastings and Kearney are coordinating economic development activities. While long-standing rivalries have limited Omaha-Lincoln cooperation, recent efforts by Omaha and Lincoln elected officials and by Downtown Lincoln Association and Downtown Omaha, Inc. representatives to explore shared issues and identify areas of mutual cooperation hold great promise.

**2. The needed systems, structures, linkages, funding and “product champions” to undertake both regional collaboration and maximizing Lincoln’s potential in the new economy are currently not in place.**

Communities which have been most successful in responding to opportunities presented by the new economy and in fostering regional economic development strategies have made careful, conscious decisions to expand the role of existing organizations or to create needed new structures with dedicated funding and staff to support them.

Facilitating linkages and successful business ventures involving university researchers, private businesses and local government requires uniquely skilled staff who can translate, bridge and negotiate successfully between three vastly different cultures – academia, for profit businesses and government bureaucracies. While tremendous potential currently exists within the UNL research community, the systems are not currently in place to take full advantage of collaborative opportunities involving business, higher education and government.

Likewise, venture capital formation and the “matchmaking” function of linking prospective angel investors with new business ventures is currently not a responsibility, mission or priority for any local organization.

Currently, Lincoln’s economic development organizations such as the Chamber of Commerce, LIBA and the Downtown Lincoln Association are either focused on traditional economy strategies or limited by resources and designated functions to carry out broader economic development activities. In 1996 the city privatized its economic development functions into the Lincoln Partnership for Economic Development (LPED). LPED’s recent update of its strategic plan reaffirmed its highest priorities as infrastructure development and support for existing business; lower priorities as determined by LPED and Chamber members are regional outreach, venture capital formation and business-higher education linkages.

The University Technology Park and its Nebraska Enterprise Forum (NEF) or the UNL Office of Technology Transfer appear to be willing to play an active role in the new economy and regional economic development efforts. However, neither entity currently has dedicated staff or funding budgeted for this purpose.

**3. The long-term benefits of undertaking the 3-pronged approach to economic development far outweigh the risks of continuing to do business as usual.**

While Lincoln’s long history of prosperity and stable economic growth make it very tempting to limit our economic development efforts, to “keep doing what we are doing”, it may be time to broaden this approach.

Lincoln’s technology infrastructure is perceived by some as inadequate due to lack of redundancy and lack of competing telecommunications carriers. While certain

geographic areas of the city (downtown, Technology Park) are well served by a concentration of fiber and cable, other areas of the city at the current time have unmet needs. The technology audit, which is currently underway, will provide valuable information about Lincoln's technology capacity, gaps, and needs as well as marketing strategies for better promoting of Lincoln's technology strengths and business environment.

The City of Omaha embarked several years ago on an aggressive, long-term comprehensive effort to position and market itself as a world-class city. By defining clearly what we want to be, Lincoln will be able to take advantage of broader opportunities in a regional economy. The business community has begun to explore partnerships and collaborative ventures with many UNL departments in addition to ventures with UNO and UNMC. These kinds of relationships can provide a competitive advantage for our region.

Sarpy County, western Iowa, Grand Island, Hastings and Kearney are each actively pursuing economic development initiatives to expand their role in our state and regional economy. The DED Target Industry Study articulates the opportunities which a regional approach to economic development offers all our communities and encourages Lincoln to utilize this study to plan for our future.

Recent demographic and population shift studies conducted by the University of Nebraska's Bureau of Business Research indicate that talented young graduates are increasingly being drawn to urban centers which offer a range and variety of long-term career options, especially for dual career households. While it is certainly not realistic for Nebraska cities to be in a competitive position with Chicago, Denver or Boston, it's very realistic to compete with cities such as Madison, Boise, Boulder, Fort Collins and Kansas City – all of whom have aggressive economic development efforts underway building on new economy opportunities.

Recent mergers and acquisitions of several large, locally-owned Lincoln companies have resulted in down-sizing, particularly in middle and senior management ranks, as well as a loss of local corporate leadership. Several large manufacturing employers with a significant Lincoln presence have reduced their workforce as a result of new technology and market changes. It is likely that both of these trends will continue, impacting our local tax base and the availability of higher-paying jobs and career opportunities.

For all of the above reasons, it is time for Lincoln to consider a broader approach to economic development. While Lincoln may continue to be in a strong position for the short-term, it is important to begin planning for the longer-term.

**4. There is a need for broad community education, discussion, understanding and consensus on the importance of the 3-pronged approach.**

Those familiar with Lincoln's civic history know that we are a very participatory community whose citizens actively engage in public process, debate and decision-



making. Our history also demonstrates that once they are sufficiently involved and educated on issues, Lincolniters can be counted on to support projects and efforts which strengthen our community.

While some sectors of the Lincoln community have a good grasp of the new economy, the benefits of regional cooperation and the progress made by other cities in leveraging assets such as major research universities to enhance economic development, there is currently not a widespread awareness of the importance of taking a broader approach to economic development. In particular, the potential that exists for enhanced collaboration by business, government and higher education is not broadly recognized.

It is important to engage the Lincoln community in a discussion of our future economy, the choices that are before us and the risks and benefits involved in these choices.

Lincoln's long-standing reputation as a "nice place to raise a family" may need to be broadened a bit to make us more attractive to young professionals, emerging entrepreneurs and singles seeking career opportunities. Many of the assets listed in the Quality of Life strategy group report on page 3-15 are factors which make us very marketable to a younger age group seeking a more urban lifestyle. The Haymarket District and downtown Lincoln's evolution as a mixed-use center with a wide variety of entertainment attractions and unique office and living space are strong factors in Lincoln's appeal.

If Lincoln chooses not to broaden its approach to economic development to the 3-pronged approach suggested in this paper, we will continue to be a good city. However, increasing numbers of people believe we have the potential to be a great city and an active player in our emerging regional economy. It is not unreasonable to suggest we adopt as our goal the description of our city proposed by a Lincoln citizen in the Journal Star's April 2001 Progress section:

#### **City can be one of best**

**"Civic and business leaders, in partnership with the University of Nebraska-Lincoln, conservation groups, arts organizations and human service agencies, must work toward making Lincoln a community that is educated and entrepreneurial, technologically advanced and environmentally aware – one of America's best state capitals and university towns."**

**Claudia Reinhardt  
Native Midwesterner  
1-year Lincoln resident**

#### **Next Steps - See Chapter 6**

# Chapter 2: Mission and Strategies

## City of Lincoln Mayor's Technology Council

### Mission Statement

To lead the City of Lincoln and bring together the public, private, and education sectors to enhance the community's core technology strengths and infrastructure to achieve a competitive advantage for Lincoln as a leading city for technology based businesses and to promote economic development.

#### Strategies:

- **Biotechnology** - "Concentrate on the transition of agribusiness to the 21<sup>st</sup> century, specifically pharmaceutical preparations (animal pharmaceuticals in particular) and research and development operations affiliated with the existing agriculture industry base such as food processing, crop engineering, and animal health." Deloitte & Touche Fantus report.
- **Electronics Technology** - Radio Frequency research, design and manufacturing. "The growing demand for telecommunications equipment is being driven by expansion of wireless networks, preparation for meeting demand for wireless data transmission, unmet demand for telecommunications services in developing countries, and Internet growth." Deloitte Touche Fantus report.
- **Metal Products** - Building on strong industry presence in Lincoln (Garner Industries, Lincoln Machine, Apollo Steel Company, Capital Contractors, Lincoln Plating Co., Custom Machine and Design, IMS, and others). Develop critical mass of outsourcing shops to larger manufacturing base.
- **Health Care** - Testing diagnostics, pharmaceutical development, and patient care. Strong industry support from Bryan LGH, Madonna Rehabilitation Hospital, St. Elizabeth, Qwest Diagnostic, MDS Laboratories, and Pfizer Animal Health. Also strong support from virology research at UNL.
- **Insurance Industry Support** - the insurance Industry is poised to move into a merger phase similar to the phase seen by the financial industry. "Consolidation in the insurance industry is projected to reduce the number of firms by up to 50% in the near future." Deloitte & Touche Fantus report. Lincoln's reliance on Insurance as major employers (State Farm, Ameritas, Lincoln Benefit Life, Security Financial, Woodmen and others) requires action to ensure these offices remain through the consolidation process.
- **Quality of Life**: Lincoln's unique quality of life can be a major asset in marketing our city as a home for new and expanding technology based companies and entrepreneurs.

Features such as our vibrant 24-hour downtown, a wide array of arts, cultural, recreational and sports attractions as well as the presence of four post-secondary educational institutions including a major research university, position Lincoln as an energetic progressive community.

- **Software Development:** Software is the new physical infrastructure of the information age that will drive the nation's new economy including Nebraska's. Support a Great Plains Software Technology Initiative that will work with a consortium of university, industry, and government to accelerate economic development of software related industries in the region with three main missions: Economic Development, Education and Training, and Research and Technology Transfer. (The Great Plains Software Technology Initiative for the New Economy Report)

# Chapter 3: Strategy Reports

- Biotechnology
- Electronics
- Metal Products
- Health Care
- Insurance Industry
- Quality of Line
- Software Development Industry

***Team Report on Strategy***

***Biotechnology Subcommittee / Mayor's Technology Council***

***August 31, 2001***

**Members:** Abe Oommen, President of GeneSeek Inc., Pat Humphrey, Principal Engineer, LICOR Inc., Kyle Holland, President, Holland Scientific, Jiangsheng Qiu, Director of Genomic Services, GeneSeek Inc., Tom Rathje, VP of R and D, DanbredUSA, Nebraska and Steve Frayser, Office of Technology Transfer, UNL.

**Summary of First Meeting**

**Goal:** Determine the current status of biotechnology in Lincoln and the surrounding areas and propose remedial measures that the city and the community could pursue.

**General Observations**

After an hour of intense discussions, the following general observations were made:

1. Any effort to promote biotechnology in Lincoln will have to happen with the full participation of the University of Nebraska (at Lincoln) and the University of Nebraska Medical Center (in the long run).
2. Plans to incorporate technology based development plans in an urban area, particularly a campus town like Lincoln, would require exploring the strength and weaknesses of the university.
3. Most if not all start-ups (technology based) came out of developments from the University. Some of these companies were eventually acquired by big corporations (Pfizer, Novartis etc) creating the wrong impression that big business was attracted to "Green Field" sites.
4. Lincoln and the surrounding communities have to develop and encourage programs to move developments from the university to the community - create an entrepreneurial atmosphere in and around Lincoln.

With an effort to understanding the role of the university in developing biotechnology, it was decided to look at the strength and weaknesses of the university and the community (Lincoln) as a whole and recommend measures that could best utilize the resources currently available. A long-term option is also presented below.

*Team Report on Strategy*

*Electronics Subcommittee / Mayor's Technology Council*

*August 31, 2001*

**Members:**

John Brasch: Senior Technologies Inc., (Sub-committee head); Chuck Henderson: Technology Park; Steve Frayser: UNL-Tech Transfer Office; Doug Grant: ISCO; Don Helmuth: UNL - Administration; Jack Huck: SECC; Jim Carrier: Lester Electrical; Jim Partington: Riser Bond; Steve Cass: Nebraska Center for Excellence in Electronics; Lance Perez: UNL – Engineering; Dave Sellmyer: UNL - Physics; Tom Smith: Smith Hayes Financial Services Corp.

**Background:**

The Electronics sub-committee was established to lead group discussions over the summer months on development of the electronic sector of Lincoln's economy. It was charged to address a list of key questions, and subsequently prepare a brief final report outlining needs, opportunities, priorities and actions as may be appropriate to support business growth in electronics.

The group met three times. Not all of the members were present at each meeting. In preparing the final document email was used to gather additional input from participants.

The first meeting focused on a listing of the issues relevant to the health and expansion of the electronics sector in Lincoln. The second meeting focused on the interaction of the University faculty and the electronics firms in the city. The third meeting focused on financing issues, while trying to bring some closure to the review process.

This report was prepared by the sub-committee head.. In large part it is an interpretive synthesis of a variety of perceptions and feelings expressed by participants. Responsibility for any misdirection, errors and omissions set forth in this document should be attributed to its author, not the individual members of the committee. Responsibility for constructive ideas goes to the subcommittee participants.

**Issues:**

1. There is an umbrella need for community visionary leadership in order to develop the electronics sector of Lincoln's economy.

Discussion: While there is consensus agreement that the electronics sector should be targeted for growth there is a need for powerful visionary leadership that is committed to making targeted industry growth happen. The Lincoln Chamber of Commerce, The Mayor's Office The University Chancellor' Office and the Lincoln Unicameral delegation must be spokesperson's for a coordinated vision that drives growth in the electronics sector.

Lincoln has a Government and University dominated economy. It has had a lesser need than Omaha or Lawrence, Kansas to develop its business sector so as to enjoy economic stability and growth. Our leaders must now show their constituencies a new vision that economic development in the electronics sector is both important and good for us and for our children.

2. There needs to be business leadership that can define and respond to the needs of the electronics industry in Lincoln.

Discussion: The Chief Executives of our electronics industry firms do not have the power and leadership voice that comes with hundreds of millions of dollars in sales. Our industry is composed of several larger companies such as ISCO, Duncan, and Centurion... several medium sized companies such as Riser Bond, Lester Electrical, Lambda Instruments, Garner and Senior Technologies... smaller firms... and several branch manufacturing units of multinational corporations such as Molex; Square D, and Telex. The size and number of companies is markedly different from what is found in Omaha.

While there is no single powerful leader, there is a group of senior executives that has exhibited significant leadership. The Presidents of several firms meet as a group as board members, founders, and developers of the Nebraska Center for Excellence in Electronics. The group is inclusive, sharing its responsibility with South East Community College, the Technology Park and firms in Omaha. The focus of this board can be broadened. Its membership can be expanded. It is thus a resource for the leadership and growth that cannot be generated in Lincoln by an individual or small group of business barons. Participation by the most senior executives of Duncan, Centurion, and the multinationals would be particularly beneficial.

3. There needs to be new powerful mechanisms that can ignite a spirit of cooperation between the engineering, science and business faculty at UNL, and the electronics business community.

Discussion: The University is Lincoln's greatest potential economic engine for development of the electronics sector. Similarly, the development of the electronics community offers the potential of consulting appointments, graduate student internship, and even dissertation support opportunities. These collateral benefits can be compelling to faculty members and top students. It can help keep academics in touch with "the real world" and it can augment their income. Simply put, economic ties to a thriving local electronics industry can help keep faculty talent at UNL. It can attract talented graduate students to Nebraska. It will help to keep talented UNL electronics graduates in Nebraska.

The University can be a source of direct entrepreneurial energy. A number of faculty members have set up successful companies over the years. These businesses have helped to keep talented faculty members at UNL, spurning opportunities to go to other campuses.

Simple visions of coffees and cocktail parties to introduce research faculty to business leaders are dysfunctional. Everyone understands that one or two social meetings offer little chance of a meaningful follow-up. A more focused effort is needed with real economic incentives in place. If both business leaders in electronics and academics can get to the critical point in cooperation where



they can see personal gain the cooperation can be self sustaining. Demonstrated success will stimulate more of the same types of behaviors. But to start, there needs to be an powerful economic stimulus.

4. There needs to be a capital resource to fund the development of risk ventures, acquire existing Lincoln firms that may be sold as owners retire, and which can fund incentives to firms that wish to locate in Lincoln.

Discussion: Money tends to be there when there is opportunity. But in Lincoln, perhaps all of Nebraska, it is not quite clear where that money is going to be found. While there are rumors that there is great wealth in Lincoln and its environs, it does not show itself in the form of angel investors, or Nebraska focused venture capital funds. By contrast there is much evidence of angel and venture capital in Colorado, some of it coming from Nebraska.

5. There needs to be a continuing replenishment and even expansion of the exceptional workforce that is the electronics industry's greatest business asset.

Discussion: As much as most of us are happy to be in Nebraska, our enthusiasm for living far from mountains or the ocean in a climate of extremes is not shared by the vast majority of non-Nebraskans. We in Lincoln are thus dependent on our own children and the children of rural and urban Nebraska to replenish and grow our workforce. This is not bad at all. In fact very talented Nebraska raised entrepreneurs, and exceptionally high quality Nebraska educated workers now benefit our business community. But we must look forward. If we expect good talent to establish their careers in Lincoln we must do two things. We must assure quality by investing aggressively in education state wide. And we must invest in the social-recreational health of our community. That is the city and the state must actively promote quality of life, while providing the infrastructure that enables the individuals and companies of Nebraska to participate in the global economy.

### **Recommendations:**

1. Governmental, University and community business leaders at the highest level need to reconsider past paradigms on the role of entrepreneurial business in Lincoln and develop new visions about what Lincoln could be if it had a thriving electronics industry built upon a dynamic interaction between entrepreneurial operations and the University. They must then spread the word and develop grass roots support that will allow programming that serves and supports the vision of a growing electronics sector, fueled by cooperation between University faculty and private firms.
2. The group of top executives of some of Lincoln's technology companies that sit on the board of NCEE should expand their role as community leaders in electronics. They should be looked to by community leaders as a resource to help guide policy and resources. Beyond the NCEE enterprise they should seek additional ventures that will facilitate the development of

Nebraska's electronics industry. Their numbers should be augmented by senior management of other electronics companies that have not participated to date. A representative of the University's leadership should become involved with the group.

3. Seed money to promote consulting relationships between the faculty and the community should be funded by the city, either directly or through LPED. The financial resources could be augmented by the University foundation, the legislature, the chamber, or private philanthropists. The important issue is that there is enough money to fund a significant interaction of up to 50 faculty members in on going technology R&D projects sponsored by local industry. The funding should continue, so as to seed additional projects for at least 3 years.
4. Governmental and community leaders should seek innovative ways to seed the formation of a developmental financial resource, possibly a shared risk pool or a semi private developmental bank that invests funds loaned by government and private capital funds in venture driven companies that present potential high rewards for acceptance of high risk.
5. All of Nebraska should proactively support thoughtful investment in the educational infrastructure of our city and our state. The Nebraska educational system will provide more than 90% of our future workforce. It will provide most if not nearly all of our future engineers. We must be especially responsive to the needs of educators during a period of increasingly competitive priorities for governmental funds.

*Team Report on Strategy*

*Metal Products Subcommittee / Mayor's Technology Council*

*September 6, 2001*

**Participants (in alphabetical order):** Nick Cusick, Industrial Machine Shop; Jack Huck, Southeast Community College; Marc LeBaron, Lincoln Plating (Chair); Phil Mullin, Garner Industries; Andy Squitieri, Molex

**General Discussions:**

The Metal Products Subcommittee met on July 23rd from 10:00 a.m. to 11:30 a.m. at Lincoln Plating and again on August 24<sup>th</sup> from 10:00 a.m. to 11:30 a.m. at Lincoln Plating.

This report is based on the discussions from the meetings and input received from the participants. We discussed the current strengths and weaknesses of the industry sector. It was decided that we are lacking appropriate vendors for raw materials, metals, sources, and subcontractors. We are also lacking airfreight providers or overnight trucking, as well as adequate airline flights and schedules.

Offsite data warehousing is an issue that could impact the industry sector. A major concern was the lack of service from Alltel. That would include the basic service, cost relative to other communities, and timely service.

Discussion was held on what resources are available or may be needed by our industry sector from post-secondary institutions (UNL, SCC, etc.). Everyone agreed that more understanding of CAD/CAM Modeling was needed as well as training on how to transfer from CAD/CAM to CNC equipment. More CNC (Computer Numerical Control) trained people are also needed.

There is an inadequate supply of qualified and skilled welders. Current training programs are adequate, but we need to recruit and train more to meet expanded demand.

More support is needed at the high school level for technical careers, along with increased state spending for technical education. No set curriculum for technology exists at the high school level at this time. Schools need to do a better job of educating students and parents on career opportunities and career paths. A manufacturing technology focused program like the Zoo School could accomplish this.

We need more toolmakers, entry-level operators and CAD operators in the workforce for the anticipated shortages in the industry. We need better skills in Windows training for all positions (basic computer skills) and team building.

Current infrastructure needs include more industrial land, possibly through the creation of “industrial parks”. Local government often is difficult to work with and is perceived to not be “friendly” to industry.

There are no major “new economy” infrastructure issues in our industry at this time. Current infrastructure appears to be adequate for the immediate time frame for the metal products sector.

Traditional capital sources are adequate for the metal products sector (bank financing), and although there are limited options for financing, it has not been a major issue in the past. The shift from community-planned funding of infrastructure to individual companies poses a potential issue.

Identified potential growth opportunities exist in internet communications. Assistance in locating smaller manufacturing companies to Lincoln by actively soliciting and recruiting smaller companies, would also help the job shop metal product companies significantly.

#### **Prioritization and Recommendation of Needs:**

A prioritization of needs would indicate that additional skilled labor is of the first priority, both in terms of quality and quantity of people. There is also an inadequate supply of entry-level people to support the metal product industry in Lincoln. High school counselors need to encourage students to consider manufacturing technology careers, and manufacturing technology curriculums need to be developed and provided at the high school level. Additionally, we recommend the implementation of a Manufacturing Technology Image Campaign within the high schools of Lincoln.

For the short term we would recommend developing a focused manufacturing technology program at the high school level (similar to the Zoo School, and Arts & Humanities School), in conjunction with Southeast Community College, utilizing their existing facility and infrastructure. This approach would facilitate an easy transition for those that wanted to pursue a technical education.

For the long-term, we recommend that one high school be designated as the technical high school, with appropriate funding and resources.

Of second priority is the lack of an adequate industrial zoned lane in and around Lincoln. Potential industrial parks need to be identified and located in the city’s Comprehensive Plan, in all quadrants of the city, including the Stevens Creek area. The city needs to proactively encourage industrial developers to identify needs, issues, and barriers for the creation of accessible industrial parks.

Finally, the city needs to facilitate needed infrastructure to existing and future industrial-zoned land, by clearly identifying an infrastructure policy that defines when and how manufacturers pay for infrastructure, versus city financing. The city needs to be more proactive in funding infrastructure development to industrial sites, as well as create an advocate-ombudsman position To help existing industry and manufacturing businesses with expansion and growth plans.

## **Team Report on Strategy**

### **Health Care Subcommittee / Mayor's Technology Council**

**September 2001**

Information from this report was gathered from information provided by professionals Madonna Rehabilitation Hospital, St. Elizabeth Hospital, Bryan-LGH Hospital and Harris Laboratories.

#### **Executive Overview:**

The health industry across the country is seeing dramatic increases in demands for its services. The baby boomers are moving into their golden years, and requiring significant amounts of increased health services. The aging of the population is requiring rapid expansion of health related services, more facilities and more skilled labor to take care of the issues of growing old. New technology and new drugs that are being moved through research pipelines are creating dramatic improvement in the quality of life for people as they age.

New technology is also playing a significant role in improving the quality of life for people who have been severely hurt in accidents. A working relationship between Madonna Rehabilitation Hospital and the Engineering Department for the University of Nebraska is making major strides in helping severely injured people.

The demand for health care services is creating a growth industry in Lincoln and is fueling the local economy. Past building expansions and future plans are providing significant opportunities for the building industry. Job growth is significant with high paying jobs being created in the community. The demands for housing and retail stores is increased by the growth in the health care industry. The health industry employs more than any other industry in Lincoln.

#### **Future General Issues:**

- . The need for capital investment for expansion of building capacity and new technology will be significant.

- . Staffing needs may reach a crisis in the next few years as demand far exceeds the availability of a trained work force. The shortage of qualified workers will slow growth.

- . The medical environment is moving rapidly towards paperless data and record keeping. Information services strategic planning to quantify and qualify the technological specifics will be required to reach the goals.

- . Hospitals will face stiff competition in areas of higher profit health care, which could limit the availability of non-profitable services hospitals can offer.

#### **Specific Technology Needs for the Future:**

- . There will be a significant increase in the need for broadband/fiber optics digital service.

- . There will be an increase in the use of the following:
  - o PCs, PDAs and other wireless equipment, optical scanners, electronic medical record keeping (central data storage) and tele-medicine.

**Key Concerns of Health Industry With Regards to Technology:**

- . Lack of data lines and level of energy support in Lincoln that demonstrates the increased security needed to protect data, records and communications required by the Health Insurance Portability and Accountability Act (HIPAA)
- . Concern that the personnel needed to install, maintain and repair the broadband/fiber optic digital lines will not be in place soon enough or in large enough numbers.
- . The shortage of nurses and other medical personnel is not being met to ensure services keep up with demand.

**Action Steps:**

- . Form a task force to prepare plans for increasing educational efforts to provide the number of skilled workers needed for the health industry. This will require area universities, community colleges and public schools systems to work with private industry to find more solutions.
- . Form a task force to create a community databank for health records.
- . Create strategies for providing the necessary broadband/fiber optics digital service for the health care industry.
- . Work closely with the University of Nebraska to take advantage of work coming out of the engineering department and the JD Edwards program.

*Team Report on Strategy*

*Insurance Industry Cluster/Mayor's Technology Council*

*July 10, 2001*

Invited: **Tom Henning**, Larry Arth, Gene Wraith, **John Haessler**, and **Rick Self**

Staff: **Sherrie Hanneman** and **Jaime Henning**\*

The Technology Council appointed by Mayor Don Wesely has identified the insurance industry as an area of focus for future growth in Lincoln. The goal of this focus group meeting was to explore ways to position Lincoln as a leader in these industries.

Nine questions were identified to address within each focus group. Some of these were not applicable to the insurance industry and therefore are not included in the responses.

- 1) What are the current strengths and weaknesses of your industry sector?
  - a) Together Lincoln and Omaha are the fourth largest concentration of insurance companies in the U.S.. While the insurance industry has seen and continues to experience merger activity most of the movement has been partnering between larger more stable and smaller less stable companies. Since most of Lincoln's companies are mutuals (either pure or holding) they are less susceptible to acquisitions or mergers.
  - b) The insurance industry is battling with careers that have greater appeal to a young person with strong math skills. Computer science, engineering and other careers seem to be first choice to the skilled student.
- 2) What emerging technologies, if any, could impact your industry sector?
  - a) The insurance industry has been slower to adapt to technology than the financial sectors. Part of this is due to regulatory issues, part to the issue of binding quotes via the internet.
  - b) While a passive system such as the internet may work with a "pull" type of product such as auto or home insurance, it is doubtful how effective it would be with "push" types of products such as health or life insurance.
  - c) Technology is being used internally in the servicing of existing accounts. Streamlining daily activities such as address or name changes has improved productivity. However, the difficulty of recruiting and retaining enough individuals to do the data input is impacting the industry.
- 3) What resources are available or may be needed by your industry sector from post-secondary institutions?
  - a) The Insurance industry endows much of the actuarial science and underwriting program at the University of Nebraska. Unfortunately anecdotal evidence indicates that the program at the University has dropped from a top five program to a top ten program. Anecdotally it has been observed that while many of the students that graduate from this program initially leave the state they often return later in their career.

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\* Bold indicates in attendance

- b) The insurance federation teamed up in an effort to educate high school guidance counselors in what insurance professionals do so they can steer more students with the necessary attributes toward the insurance industry.
- 4) Quantify qualified workforce needs and any anticipated shortages in your industry sector.
  - a) In general the difficulty is finding qualified, educated, and diverse workers at a reasonable cost.
  - b) The greatest shortage now and in the near future is in the clerical fields. The perception among those individuals being recruited is that they will be working with an elaborate software that will be difficult to learn. However, the insurance industry is still largely a workstation environment based on the basics of insurance.
  - c) Customer service is another area where qualified workers are difficult to find. It seems young people are moving away from attaining the skills necessary for customer service. Many feel they can spend the day interacting via the computer, and have weak communication skills.
  - d) Good sales training or experience is difficult to find in the current labor market.
- 5) Identify any traditional infrastructure needs your industry sector faces now or in the future.
  - a) Air service is still important to the insurance industry. Much of the business is best done in person, and most of the business done by the major insurance employers in Lincoln takes place outside of Lincoln.
  - b) Maintaining infrastructure and getting the needed roads to sustain a reasonable traffic flow.
- 6) Identify any new economy infrastructure needs your industry sector faces now or in the future.
  - a) Getting telephone systems up and running – digital or not. Cannot have down time in this industry. Being more efficient and more cost effective in the phone system.
- 7) Identify and capital needs and possible funding sources for new and expanding businesses in your industry sector.
  - a) Not applicable.
- 8) Identify potential growth opportunities as well as any threats to growth in your industry sector.
  - a) The insurance sector has an advantage in Lincoln because of a very good working relationship with the Nebraska Department of Insurance. The regulatory climate in Nebraska is more congenial than in other areas.
  - b) The lack of diversity in Lincoln could act as a hindrance to growth as insurance companies attempt to mirror their customer base. It has traditionally been difficult to recruit people of color or those whose interests do not revolve around children or sports.
- 9) Prioritize the needs you have identified, recommend any possible action steps to address them and potential “product champions” to assume responsibility for these actions.
  - a) The three greatest needs for the insurance industry in Lincoln, Nebraska are:
    - i) Unemployment situation – finding qualified, educated, and diverse workers at a reasonable cost.
    - ii) Air service – The Lincoln airport is underserved making it difficult for staff who must travel regularly.
    - iii) Maintaining infrastructure – Getting needed roads and reasonable traffic flow.
  - b) Some recommendations are:



- i) More partnerships with the University of Nebraska to showcase the insurance industry as a viable option to other careers. May be possible to work with Dr. Thomas Zorn regarding creating an insurance designation within the CBA.
- ii) Joint community effort to recruit workers. A concentrated community effort to market Lincoln and attract our defectors back, as well as utilizing internships to keep our young people from leaving initially.
- iii) Assist the Lincoln Airport Authority in attracting better service to the Lincoln airport. Flight times currently decrease productivity.

## **Team Report on Strategy**

### **Quality of Life Subcommittee Report / Mayor's Technology Council**

**September 2001**

The Mayor's Technology Quality of Life subcommittee was co chaired by Polly McMullen and Ed Paquette. Three group meetings and some independent interviews were held.

Committee Members: Rich Claussen, Carol Connor, Deane Finnegan, Deepak Gangahar, Sherrie Hanneman, Polly McMullen, Scott Miller, Gates Minnick, Julie Olson, Ed Paquette, Cecil Steward, Rick Wallace and Reverend Otis Young.

The committee reviewed the list of questions assigned to all the subcommittees and began to think of how these questions effected or elucidated thoughts about the quality of life in Lincoln Nebraska.

#### **I. What are the current strengths and weaknesses of your industry sector?**

The discussions centered on the following aspects of life in Lincoln:

- A. That Lincoln and Omaha (the I-80 corridor) should be well positioned for future technological growth given the current and future development of communication centers in Omaha and Lincoln.
- B. Any geographic location where intelligence clusters is where wealth will accumulate. The highly educated population of eastern Nebraska in general and Lincoln specifically should give Lincoln an advantage.
- C. The quality of K-12 education, community colleges, private colleges and the University can set Lincoln apart from many other Midwestern communities.
- D. As more technology frees individuals from being located in a certain place of business, the more important it will be for individual places to make themselves more attractive to a work force.
- E. Lincoln currently enjoys many of the "Quality of Life" attributes that have attracted technological growth to other areas of the country. These include:
  - 1. Educated work force with strong work ethic
  - 2. Lack of distractions
  - 3. Low crime
  - 4. Reasonable taxes
  - 5. Affordable housing
  - 6. Small town ethos in a relatively large city environ
  - 7. Dedication to the arts
  - 8. Recognition of our prairie culture

9. Excellent medical facilities
10. State government seat
11. Safe and secure community
12. Clean air
13. Great place for family living
14. Parks, recreation and pathways

- F. Many felt that Lincoln benefits from the quality of its neighborhoods and its “small big city” structure.
- G. Lincoln has earned and been recognized by many ratings as a city that enjoys a high quality of life quotient.
1. Five Star City Expansion Management Magazine
  2. High ratings on the Gallup Community Vitality Index.

While the Quality of Life Committee members felt that we do have many strengths and enjoy a very high quality of life, they also felt that it is crucial to consistently monitor and reflect on ways to ensure that we keep and improve that quality of life. One member pointed out how easy it is to take for granted what you have and appreciate it only after you lose it.

Discussions of what might be lacking in order for the city to attract the new technology economy centered primarily on image and leadership. The challenge for Lincoln is to build and cultivate the skills and energies of its citizens as entrepreneurs, leaders, and workers.

“To thrive in an era of ever-widening choice, communities must look to factors relating to lifestyle and cultural choice that appeal to a broad range of companies.” Civic spirit and pride generated by the media, local government, and educational institutions must project the perception and image of Lincoln being the “place to be” for work and for family. Many who participated felt that the positive image of Lincoln has been clouded in controversy over such things as traffic bypasses, petty politics, defeated educational bond issues, and Antelope Valley anxiety. All of these tend to tarnish the image of the community and ultimately affect the pride we have in our community. It was a universal belief that local media needs to be more proactive and positive toward the continued careful development of our city. Others felt that new business leaders need to emerge to help shape the business climate in the community. Much of this discussion centered on the loss of locally owned large businesses that truly had a civic consciousness that produced and provided varieties of community support. The business leaders and the funding of community projects by their businesses often reflected that support in community service. The “nationalization” of these Lincoln-based companies has participants concerned that the corporate consciousness for Lincoln has changed. There was considerable discussion as to how the community can replace the corporate leadership lost as result of these takeovers.

- II. **What emerging technologies, if any, could impact your industry sector?** The subcommittee comprised individuals from many professional areas. While we did not concentrate on any one area in respect to technology, there was consensus that Lincoln

must be technologically wired and able to adapt easily to future technology needs in order to attract and maintain key businesses. There was a general feeling that if we do not adapt, we will not attract new business and we will ultimately lose existing businesses. These business losses would be a severe detriment to the future quality of life in Lincoln.

- III. **What resources are available or may be needed by your industry sector from post-secondary institutions?** The Committee completely recognized the importance of higher education adding to the quality of life in Lincoln -- not only the University of Nebraska-Lincoln, which adds significantly to the ethos of the community, but the other educational institutions as well. One member suggested that early in our history Lincoln was considered the Athens of the plains. It is important that the city and state governments, the business community, and higher education constantly explore ways to support one another. Perhaps our greatest asset is the opportunity for this synergism to occur. A research university such as UNL provides a valuable resource for technology firms but does so only if the university is open to and actively facilitates linkages to the private sector.
- IV. **Quantify qualified workforce needs and any anticipated shortages in your industry sector.** The Quality of Life Committee agreed that we must attract, educate, train and maintain a top-level workforce in all fields of endeavor. A broad-based full-employment work force is essential to the health and vitality of our city. There is a concern that currently we cannot meet the demands for a qualified work force, especially in some areas where technology expertise is required. The supply of technicians and technical support is as important as the availability of engineers and scientists to support growing technology firms.
- V. **Identify any traditional infrastructure needs your industry sector faces now or in the future.** There was a general consensus that the traditional infrastructure is adequate given the city's comprehensive plan and recent agreement to move forward with Antelope Valley and the east bypass. However, they also felt that it is important to keep the focus on downtown development, especially in view of the proximity of UNL to the city and tech park. Further business expansion east or southeast was seen to be potentially detrimental to inner-city development.
- VI. **Identify any new economy infrastructure needs your industry sector faces now or in the future.** The reports of the other subcommittees clearly stated the need for the "new economy" infrastructure for their respective areas. What is of concern to our committee is what seems to be unwillingness for all parties -- especially the utility service providers -- to work together for the betterment of the greater Lincoln community. The cities that have prospered in the new economy have, in fact, cooperated, coordinated and collaborated for the greater good of the community. This has not yet happened in Lincoln but it must if we are to take advantage of the new economy. If not by cooperation, then perhaps legislation is the only way that we can make it happen. It takes a common vision of the future and a local plan of action to develop the necessary environment for technological growth and development. Cooperative leadership from all sectors -- academic, government and private -- is an indispensable element to Lincoln's future. We cannot attract new technology business growth until this happens in our city.

VII. **Identify any capital needs and possible funding sources for new and expanding businesses in your industry sector.** The need for angel capital and venture capital is just beginning to be understood in our community. It is interesting to speculate that as locally owned businesses and banks move or are taken over it may become harder and harder to find capital to be invested and reinvested in our community. As one committee member said, profits go to Little Rock, San Francisco and Minneapolis and get reinvested in their economies – not Lincoln's!

VIII. **Identify potential growth opportunities as well as any threats to growth in your industry sector.** The wonderful quality of life in Lincoln should make for continued economic growth and development. Our committee feels the Lincoln Chamber of Commerce must take a more aggressive attitude toward recruiting high tech companies and must lobby for the necessary implementation of the action items and recommendations in the Mayor's Technology Committee report. Our local and state governments working with the Chamber can make a difference by creating a business-friendly environment for technology firms. Industry organizations such as the cluster groups put forth by the Technology Council can provide important forums for technology industries to exchange ideas, keep abreast of developments in their field and advocate for issues that affect their industries. It is clear that as firms and certain technology clusters develop, they spawn other firms in that cluster.

### **Conclusion:**

Lincoln stands at a very important juncture in its future. The "big small town" has given way to a "small big city". Demographic trends suggest significant growth in Lincoln's future population. While we may not be able to control this growth, we can and should work toward growing our technology industry base by creating a friendly climate and easy technology transfer from the university to the private sector. More important to this subcommittee's opinion is ensuring and maintaining the quality of life that we believe is so precious not only to Lincoln's present but definitely with respect to its future. If Lincoln can continue to build on its past successes mentioned in this report, adopt a forward-thinking comprehensive plan for growth and development, and find the corporate and business leadership necessary to implement that plan, Lincoln will be able to take its rightful place as a 21<sup>st</sup> century city. We also believe that we must look for ways to engage a relationship with Omaha for collectively we are a much stronger magnet than pursuing technology individually. We have a great community. It is incumbent on the citizenry, governmental and educational institutions and our business community to ensure the "good life" in Lincoln, Nebraska.

Note: Polly and Ed wish to thank the members of the committee for their assistance and thoughtful comments. A special thanks to the Gallup organization for sharing their community vitality index with us. Additional thoughts and comments were taken from Joel Kotkin's book "The New Geography" as well as the executive summary of "Developing High Technology Communities" by Innovation Associates.

*Team Report on Strategy*

Software Development Industry Sector Team / Mayor's Technology Council

*August 31, 2001*

**Participants (in alphabetical order):** Jurita Anschutz, The Gallup Organization; Katie Barton, The Gallup Organization; Jim Dager, Design Data; Tom Duden, Design Data; Scott Henninger, CSE/UNL; Patrick J. Kerrigan, Information Technology Inc.; Gary Loft, Global Insurance Solutions Group, Inc.; Rob Nickolaus, Digital IMS; Rich Sincovec, CSE/UNL; David Steen, Sandhills Publishing; Heather Thomas, Sandhills Publishing; Bradley Walker, Nanonation.net.inc; Art Zygielbaum, NET/UNL

**Summary and Recommendations:**

The Software Development Industry Sector Strategy Team met on August 6 from 10:30 to 12:30 on the UNL campus and again on August 27 from 10:30 to 12:15 on the UNL campus.

This report is based on the discussion at the meetings and written input received from the participants. We addressed the current strengths and weaknesses of software development in this region, emerging technologies that could impact software development, resources that are available or may be needed from post-secondary institutions, qualified workforce needs and any anticipated shortages, infrastructure needs now or in the future (i.e., roads, sewer, water, etc.) including new economy infrastructure needs (i.e., bandwidth, redundancy, high-speed connection, both wired and wireless, etc.), capital needs and funding sources for new and expanding businesses, and potential growth opportunities including threats to growth.

We first present our Recommendations. The discussions that led to them are summarized in the following section. A Chart initially prepared by The Gallup Organization representatives and updated to reflect our deliberations is attached as an Appendix.

The factors that we need to attract new business are the same ones that we need to keep our existing businesses. Businesses go where there is a large pool of talent, and talent goes where there are a large number of businesses. In order to become a technology center, Lincoln must find a way to attract and keep talent and business alike. "Is Lincoln open for growth?" This is an important overriding question that we did not attempt to answer.

***Recommendation 1: Business Climate***

The Mayor should form a task force to review current practice and recommend how the city can be more proactive in supporting business through planning, zoning, taxation, and infrastructure.

- Attract and maintain industry leaders by proactively supporting business and maintaining Lincoln's high quality of life.
- Develop strategies for recruiting and retaining critical mass of technology-based businesses and qualified personnel.
- Reduce taxes, and provide tax incentives for new and existing businesses.

- Actively communicate business support resources that are available to both existing and potential businesses.

### ***Recommendation 2: General Infrastructure***

The Mayor should charge appropriate city government entities to aggressively pursue the following items.

- Actively promote Lincoln's quality of life.
- Improve local air service by adding regional jet service to major hubs or consider building a high-speed light rail transit system to Omaha's airport.
- Anticipate and plan for growth in advance of need.
- Bring in a competitive phone/communications company and/or develop the legal means to require a supportable but competitive level of service.

### ***Recommendation 3: Technology Specific Needs***

The city, business community, and the University represent a three-way partnership in defining the future of Lincoln and the region with responsibility to identify and resolve issues including the following:

- Reduce the outflow of graduating students by making students aware of local career opportunities and promoting the advantages of staying in Lincoln.
- Pursue joint industry/university courses, training, seminars, clinics, and projects.
- Emphasize the education of software system designers in existing University programs.
- Provide assistance to startup companies and take appropriate actions to assure that the resources for their growth here are available.
- Create an active and continuing "technology council" to serve as a catalyst for companies to work together to address important issues and be a strong voice representing their interests.

## **Discussion Supporting Recommendations:**

### ***Business Climate***

Perhaps the biggest difficulty that Lincoln faces in its attempts to grow in the technology arena is that of "critical mass." This critical mass is the number of qualified personnel, and the number of technology-based businesses providing jobs for qualified personnel. This is not just a balance between personnel and business, but one of sheer numbers also. Qualified personnel tend to go where there are a lot of businesses offering exciting career opportunities, and businesses tend to go where there are a lot of qualified personnel to choose from.

It's the old "chicken and egg" scenario. How does Lincoln attract new technology businesses? By having a large pool of qualified personnel to choose from. How does Lincoln attract a large pool of qualified personnel? By having a large number of technology-based businesses to choose from.

In order to become a "technology center" Lincoln must focus on developing, attracting and maintaining talent, and developing, attracting and maintaining technology-based business. The

actions of the entrepreneurs at the top of key organizations in Lincoln will have a major impact in Lincoln becoming a “technology center.” Technology will always be emerging, so the successful companies are the ones that can go with the flow; that is, those who can see the entire picture, identify opportunities, and drive projects to the marketplace.

Another challenge in luring and retaining companies and candidates to/in Lincoln is taxes. The taxes in Nebraska and Lincoln are high. Efforts should be made to address the tax issue. Our appetite for tax revenue should be proportionate to the growth in the tax base; otherwise we will tax ourselves out of the competitive marketplace. We should add tax incentives for both new and existing business.

Nebraska has a progressive income tax system (which was changed in 1987 from a flat tax percentage of the Federal Income Tax owed) with rates topping out at over 6.5%. The sales tax on computer consulting is onerous since only 11 other states charge sales tax on this service. The schools rely heavily on property taxes, which places a burden on individuals and businesses to pay for escalating costs.

Many of entrepreneurs leave Nebraska after selling their businesses to escape the tax burden in the state. This results in a “brain drain” of entrepreneurs with the savvy to start up new businesses.

All of the government bodies in the State need to be conservative in their budgeting process so Lincoln can remain competitive with the rest of the country. Nebraska should repeal the sales tax on computer services and can do so by passing LB648. It would also be beneficial if the state adopted a flat tax rate for the income tax.

Lincoln would be best served by improving the overall business climate including zoning actions and taxes. Business leaders will be more likely to move to Lincoln or to stay in Lincoln if there is the perception that Lincoln has a pro-business bias.

The city of Lincoln should adopt a more “business friendly” attitude in working with businesses that want to expand or move into the area. If the city had a liaison for helping businesses cut through “red tape,” this could potentially help projects get done in a timelier manner and create a better relationship between the city and the business community. The city should support an incubator facility for software companies.

Programs that provide assistance to startup companies, and help secure venture capital for startup companies are in general a good idea, and beneficial for "growing our own" new businesses. But it can also be a double-edged sword. A person that founded a startup company here in Lincoln took advantage of the various programs designed to help find investors. However, as soon as he obtained the venture capital to grow, he moved his new company to California because he could not find the talent he needed here.



### ***General Infrastructure***

One of the challenges in luring technology candidates with the requisite skill sets to Lincoln is the image people have of Nebraska. It was noted that once you are able to get people to visit Lincoln, they are almost always impressed enough with the community to move here. Perhaps either the city or the Lincoln Chamber of Commerce should do more to let candidates know about all of the technology companies in Lincoln and the growth history and potential of these companies.

Perception is very important when it comes to attracting leaders and talent. The weather, lack of mountains and oceans, lack of professional sports, limited nightlife, etc. often deter talent from considering Lincoln so it is essential to promote the quality of life, the work ethic, etc. offered in Lincoln. Many people return to Lincoln after being away for years to return to the "good life."

Lincoln is fortunate to have the University here because it not only provides educational opportunities but also cultural and entertainment opportunities, from sports to Broadway tour groups to top-name entertainment at the Lied, as well. The UNL women's athletic teams are almost all nationally ranked and very enjoyable to watch as are most of the men's teams.

Lancaster County also boasts an excellent bicycle and running trail system along with professional hockey and baseball. Lincoln offers children a full range of musical, dancing and athletic opportunities and a great Children's museum. Surprisingly Lincoln was recently ranked 4<sup>th</sup> by Shape magazine in physically fit citizens due to the wonderful clubs and athletic facilities here. The golf courses here are also top notch as well as affordable and accessible.

The biggest factor weighing in Lincoln's favor is the "quality of life" that we have to offer. That's a really broad term, and a very important factor that covers much of what we value in our existence. Another important factor is that people in Lincoln have a good work ethic in general.

You can't expect a national or international company to locate here if they have to drive to Omaha for flights. Flights out of Lincoln are sparse, have high fares and are frequently late. Late originating flights can lead to missed connections and missed meetings. Any technology-based business has to travel and flight accessibility will be a primary factor in their decision on where to locate. For example, it is very difficult to get to anywhere in Texas flying out of Lincoln. Either we need to improve service in Lincoln or build a high-speed transit system to Omaha's airport.

Lincoln seems to grow in a sort of "knee jerk" fashion. Only after there is growth in an area, does the infrastructure catch up. New shopping centers are built and housing developments added, but it seems to take several years for roads to be widened. By then, traffic levels have already increased. In other communities, growth seems to be more planned and organized. Roads are built to handle anticipated future traffic loads, and development follows. The roads in Lincoln are not wide enough to properly handle the volume of traffic and many of the roads just outside of the city limits are still gravel. Lincoln needs to do a better job of planning for growth.

In most business environments, competition is good. It produces better products, and better service. It would be extremely beneficial for Lincoln to have another communications provider.

### ***Technology Specific Needs***

Universities and colleges may be the most influential factor in the relocation of young adults. A high percentage of the graduates would like to stay in the same general location where they went to college, especially if they are from rural areas, making a city like Lincoln very attractive. Graduates from larger metro areas may not have the same perception of Lincoln although appropriate professional opportunities coupled with Lincoln's quality of life may tend to keep them here.

An important step is to sell Lincoln to students as they prepare to enter the job market. We have to stop the outflow of talent. Lincoln's "best kept secrets" should not be secret. Students need to be made aware of the many opportunities that are available to them right here in Lincoln. Local technology-based businesses should be encouraged to hold open houses and invite students to become familiar with their organizations. Students should be encouraged to attend these open houses.

The University should be proactive in informing students of the facts: there are many world-class companies located in Nebraska; these companies can offer them challenging work and a high quality of life; and they would do well to look into them.

The advantages that Lincoln offers over other perceived technology centers should be actively promoted. For example, a poster in the Student Union showing the Freeway at 5:00 in Atlanta, Denver, San Jose, Houston, and Chicago, with the byline "Why would you want to leave?" would send a strong message. Sell the quality of life offered in Lincoln compared to other locations they might consider. Alternatively, posters that feature the logos of Nebraska companies who have rewarding positions for computer people would go a long way in highlighting career opportunities here. The region and the city's success rest with the local graduates that want to continue to live in this region.

The University is strong in educating high-level computer scientists and engineers who have the background to write compilers, operating systems, or to design chips, however, what is needed in this region is good, solid, business software developers. The University should focus more on software system designers where a software system is composed of many programs, is used by someone other than the developer, must be maintained in an iterative cycle between user feedback and enhancements, and involves working with code that others have developed. Learning to work in teams is important.

We would also like to see the University encourage computer science students to specialize in areas such as business, banking, or engineering. The curriculum should be examined to determine if some currently required subjects could be eliminated thereby allowing the student more flexibility in focusing on an application area of specialization. Most programming needs in the working world involve specialized applications. By giving the student the opportunity to tailor his/her undergraduate studies, the student will be productive in a shorter period of time as he/she begins his/her career. This benefits not only the new graduate but the business he/she works for as well.

Analogous to the J.D. Edwards Honors Program model for business software oriented computer scientists, UNL should consider a practical experienced-based educational program for software developers in all target disciplines. This could be done in concert with local software businesses. Local software businesses could provide practical experience in the form of clinics. Intellectually stimulating and challenging experiences could entice students to begin their work careers with local businesses.

The University should team with local industry to address educational issues such as high-intensity courses, seminars, and software engineering tools and training. Other issues include intern programs, clinics, and mentoring. As companies take on more and more challenging software, it is important that they have a support system to solve real problems both technical and managerial. The University should provide this support.

Lincoln does have some challenges in providing continuing education classes and training for computer technicians, programmers, managers, etc.

Software including online, stand-alone, database, etc., requires mechanisms for production and delivery. Packaged software requires access to packaging, publishing, distribution and media production capabilities or entities. Online products and services require access to high-bandwidth and highly reliable (redundant) Internet access. An incubator facility such as the university's tech park can provide infrastructure support for fledgling endeavors.

There already are a small number of software development companies in Lincoln. They have not formed any sort of professional organization. Such a liaison could provide mentoring, and a stronger voice for lobbying for infrastructure and economic incentives. In addition, such an organization could hold conferences and support an employee feeder system through the university.

The discussions clearly indicated strong interest in improving the software business climate in Lincoln. We have much to offer in "the good life" and in an excellent university. Missing elements need to be added and weak ones augmented for us to achieve our objectives. The future of Lincoln depends upon it.

## **Chapter 4: Technology Infrastructure Study**

The Technology Infrastructure Study is being carried out by The Gallup Organization, Inc. The results will be available after January 1, 2002. The questions used in the study are included in this section.

# CRT

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**FIELD FINAL - OCTOBER 3, 2001**  
**(Columns are ABSOLUTE)**

The Gallup Organization, Inc.

Project Registration #908935

**MAYOR'S TECHNOLOGY COUNCIL**

City Center: MIS

Technology Infrastructure Study

Telecom Managers - Lincoln Employers

P. Ruhlman/Muller

Jane Wood, Specwriter

October, 2001

\_\_\_\_\_ APPROVED BY CLIENT

\_\_\_\_\_ APPROVED BY PROJECT MANAGER

n=200

I.D.#: \_\_\_\_\_ (1- 6)

\*\*AREA CODE AND TELEPHONE NUMBER:

\_\_\_\_\_  
(649 - 658)

\*\*INTERVIEW TIME:

\_\_\_\_\_  
(716 - 721)

Hello, I am \_\_\_\_\_ from The Gallup Organization here in Lincoln, Nebraska. Today we are conducting a brief questionnaire with businesses concerning your company's telecommunications service and future needs. The study is sponsored by the Mayor's Technology Council and is endorsed by the Mayor's Office and key business leaders here in Lincoln. May I speak with the person most familiar with your company's day-to-day telecommunications and data communication needs?

1 Respondent available - **(Continue)**

7 Respondent not available -  
**(Set time to call back)**

8 (Soft Refusal)

S1. Are you the person in your company who is responsible for choosing the current long-distance telephone carrier and do you have some familiarity with overall day-to-day operations of your telecommunications?

1 Yes - (Continue)

2 No (Ask to speak to the

3 (DK) person that is and

4 (Refused) Reset to Introduction)

\_\_\_\_(1002)

1. What kind of business are you in? (Open ended)

01 Other (list)

02 (DK)

03 (Refused)

04 HOLD

05 HOLD

(1301) (1302) \_\_\_\_\_

2. Could you please estimate your company's monthly bill for telecommunications - this includes outbound calling, incoming 800 calls, fax lines, data lines, calling cards, but does NOT include charges to your local phone company? (Open ended **and code actual amount in dollars**)

0000 None/Nothing

9997 \$9,997+

9998 (DK)

9999 (Refused)

\_\_\_\_\_  
(1303 - 1306)

3. Now, please tell me what percent of your total telephone bill - excluding charges for local service - is for **(read and rotate A-F)**? (Open ended **and code actual percentage**)

000 None  
101 Less than 1%  
102 (DK)  
103 (Refused)

- A. Outbound voice long distance calling, both domestic and international. This includes calling card charges and fax

\_\_\_\_\_ (1307 - 1309)

- B. Inbound 800 service, both domestic and international

\_\_\_\_\_ (1310 - 1312)

- C. Audio and video teleconferencing

\_\_\_\_\_ (1313 - 1315)

- D. Dedicated T-1 access

\_\_\_\_\_ (1316 - 1318)

- E. Data services ("frame relay"), but NOT Internet services

\_\_\_\_\_ (1319 - 1321)

- F. Internet expenses (ISP services)

\_\_\_\_\_ (1322 - 1324)

**(If code "000" or "101-103" to ALL in #3 A-F,  
Skip to "Note" before #7;  
Otherwise, Continue)**

4. **(For each response in #3 A-F with a code "001-100", ask:)** Now, for each of these services, tell me if you think each of the following will increase, decrease or stay the same for your company or organization over the next 5 years. How about **(read and rotate A-F, as appropriate)**?

3 Increase

2 Stay the same

1 Decrease

4 (DK)

5 (Refused)

A. Outbound voice long distance calling, both domestic and international. \_\_\_\_\_(1325)

B. Inbound 800 service, both domestic and international

C. Audio and video teleconferencing  
\_\_\_\_\_(1327)

D. Dedicated T-1 access \_\_\_\_\_(1328)

E. Data services ("frame relay"), but NOT Internet services

F. Internet expenses (ISP services)  
\_\_\_\_\_(1330)

**(If code "1" to ANY in #4 A-F, Continue;  
Otherwise, Skip to "Note" before #6)**

5. **(For each code "1" in #4 A-F, ask:)** What percent decrease in **(read and rotate A-F, as appropriate)** do you anticipate in the next 5 years (by 2006)? (Open ended **and code actual percent**)

LT Less than 1%

DK (DK)

RF (Refused)

A. Outbound voice long distance calling



	(1331 - 1333)
B. Inbound 800 service	
	(1334 - 1336)
C. Audio and video teleconferencing	
	(1337 - 1339)
D. Dedicated T-1 access	
	(1340 - 1342)
E. Data services ("frame relay")	
	(1343 - 1345)
F. Internet expenses	
	(1346 - 1348)

**(If code "3" to ANY in #4 A-F, Continue;  
Otherwise, Skip to "Note" before #7)**

6. **(For each code "3" in #4 A-F, ask:)** What percent increase in **(read and rotate A-F, as appropriate)** do you anticipate in the next 5 years (by 2006)? (Open ended **and code actual percent**)

LT Less than 1%  
DK (DK)  
RF (Refused)

A. Outbound voice long distance calling

(1349 - 1351)

B. Inbound 800 service

\_\_\_\_\_  
(1352 - 1354)

C. Audio and video teleconferencing

\_\_\_\_\_  
(1355 - 1357)

D. Dedicated T-1 access

\_\_\_\_\_  
(1358 - 1360)

E. Data services ("frame relay")

\_\_\_\_\_  
(1361 - 1363)

F. Internet expenses

\_\_\_\_\_  
(1364 - 1366)

**(If code "000" to ANY in #3 A-F, Continue;  
Otherwise, Skip to #9)**

7. **(For each code "000" in #3 A-F, ask:)** Will you be adding  
**(read and rotate A-F, as appropriate)** within the next 5  
years?

- 1 Yes
- 2 No
- 3 (DK)
- 4 (Refused)

A. Outbound voice long distance calling  
\_\_\_\_\_(1367)

B. Inbound 800 service \_\_\_\_\_(1368)

- C. Audio and video teleconferencing \_\_\_\_\_(1369)
- D. Dedicated T-1 access \_\_\_\_\_(1370)
- E. Data services ("frame relay") \_\_\_\_\_(1371)
- F. Internet expenses \_\_\_\_\_(1372)

**(If code "1" to ANY in #7 A-F, Continue;  
Otherwise, Skip to #9)**

8. **(For each code "1" in #7 A-F, ask:)** About how much do you think you will be spending on **(read and rotate A-F, as appropriate)** five years from now? (Open ended **and code actual amount**)

9997 \$9,997+

9998 (DK)

9999 (Refused)

- A. Outbound voice long distance calling

\_\_\_\_\_

\_\_\_\_\_  
(2201 - 2204)

- B. Inbound 800 service

\_\_\_\_\_

\_\_\_\_\_  
(2205 - 2208)

- C. Audio and video teleconferencing

\_\_\_\_\_

\_\_\_\_\_  
(2209 - 2212)

- D. Dedicated T-1 access

\_\_\_\_\_

\_\_\_\_\_  
(2213 - 2216)

- E. Data services ("frame relay")

\_\_\_\_\_  
F. Internet expenses (ISP services)

\_\_\_\_\_  
(2217 - 2220)

\_\_\_\_\_  
(2221 - 2224)

9. About how many employees are there at your company or organization site here in the Lincoln area? (Open ended **and code actual number**)

9997 9,997+

9998 (DK)

9999 (Refused)

\_\_\_\_\_  
(1819 - 1821)

10. What percent of your employees **(read and rotate A-C)?**  
(Open ended **and code actual percent**)

000 None

101 Less than 1%

102 (DK)

103 (Refused)

A. Use the Internet on a regular basis at work

\_\_\_\_\_  
(1829 - 1831)

B. Use e-mail on a regular basis at work

\_\_\_\_\_  
(1832 - 1834)

C. Use a WAN (Wide Area Network) for data transfer

\_\_\_\_\_  
(1835 - 1837)

**(If code "005-100" to ANY in #10 A-C, Continue;  
Otherwise, Skip to #13)**

11. Will your Internet and/or e-mail or data transfer needs increase, decrease or stay about the same in the next five years?

- 3 Increase
- 2 Stay about the same
- 1 Decrease
  
- 4 (DK)
- 5 (Refused)

\_\_\_\_\_(1838)

**(If code "1" or "3" in #11, Continue;  
Otherwise, Skip to #13)**

12. What percent **[(If code "1" in #11, read:) decrease/(If code "3" in #11, read:) increase]** do you anticipate in the next 5 years (by 2006)? (Open ended **and code actual percentage**)

- LT Less than 1%
- DK (DK)
- RF (Refused)

\_\_\_\_\_  
(1839 - 1841)

13. Please rate Lincoln's telecommunications system with regard to each of the following. Please use a one-to-five scale, where "5" is outstanding and "1" is clearly inadequate for your needs. How about **(read and rotate A-D)**?

- 5 Outstanding
- 4
- 3
- 2
- 1 Clearly inadequate
  
- 6 (DK)

- 7 (Refused)
- A. Reliability ("uptime")  
\_\_\_\_\_(1842)
- B. Redundancy (backup system) \_\_\_\_\_(1843)
- C. Restoration time when an outage is reported  
\_\_\_\_\_(1844)
- D. Time to install new lines  
\_\_\_\_\_(1845)

**(If code "005-100" in #10 A-C, Continue;  
Otherwise, Skip to #15)**

14. Please rate Lincoln's telecommunications systems with regard to each of the following concerning your INTERNET NEEDS. How about **(read and rotate A-B)? (Repeat scale, if necessary)**

- 5 Outstanding  
4  
3  
2  
1 Clearly inadequate

- 6 (DK)  
7 (Refused)

- A. Speed \_\_\_\_\_(1846)
- B. Connectivity (availability)  
\_\_\_\_\_(1847)

15. Please tell me your impression of Lincoln's telecommunications systems with regard to your company's NEEDS FOR THE FUTURE. Are they adequate or not for **(read A-C)?**

- 1 Yes  
2 No

- 3 (DK)
- 4 (Refused)

A. Overall telecommunications, including outbound, inbound, fax, etc. \_\_\_\_\_(1848)

B. Internet services \_\_\_\_\_(1849)

C. Large amounts of data transfer  
 \_\_\_\_\_(1850)

16. What additional services in the area of telecommunications would enhance your business's potential for growth and expansion? (Open ended) **(Allow three responses)**

- 01 Other (list)
- 02 (DK)
- 03 (Refused)
- 04 None
- 05 HOLD

_____	1st Resp: (1851) (1852)	_____
_____	2nd Resp: (1853) (1854)	_____
_____	3rd Resp: (1855) (1856)	_____

17. Are you interested in receiving meeting notices and future information from the Mayor's Technology Council?

- 1 Yes - **(Continue)**
- 2 No **(Skip to Validate and Thank)**
- 3 (DK) **(Skip to Validate and Thank)**
- 4 (Refused) **(Skip to Validate and Thank)** \_\_\_\_\_(1857)

18. **(If code "1" in #17, ask:)** Please tell me your mailing address and/or e-mail address.

FIRST NAME:

\_\_\_\_\_

\_\_\_\_\_  
(1901 - 1920)

LAST NAME:

\_\_\_\_\_

\_\_\_\_\_  
(1921 - 1940)

ADDRESS:

\_\_\_\_\_

\_\_\_\_\_  
(1941 - 1980)

CITY:

\_\_\_\_\_

\_\_\_\_\_  
(2001 - 2040)

STATE: **(INTERVIEWER NOTE: Enter "NA" if  
using e-mail only)**

\_\_\_\_\_

(2041) (2042) \_\_\_\_\_

ZIP CODE: **(INTERVIEWER NOTE: Enter  
"99999" if using e-mail only)**

\_\_\_\_\_

\_\_\_\_\_  
(2043 - 2047)

E-MAIL ADDRESS: **(INTERVIEWER NOTE:  
Enter "NE" if NO e-mail address)**

\_\_\_\_\_

\_\_\_\_\_  
(2112 - 2151)

**(VALIDATE PHONE NUMBER AND  
THANK RESPONDENT BY SAYING:)**

Again, this is \_\_\_\_\_, with the Gallup  
Organization of Lincoln, Nebraska. I  
would like to thank you for your time.  
Our mission is to "help people be



heard" and your opinions are important  
to Gallup in accomplishing this.

INTERVIEWER I.D. #:

\_\_\_\_\_(571-  
574)

jlw\2001\Mayor's Technology Council\  
MTC Technology Infrastructure Telecom Managers 0109

# CRT

GALLUP,MAY53636  
G636

**FIELD FINAL - OCTOBER 3, 2001**  
**(Columns are ABSOLUTE)**

The Gallup Organization, Inc.

Project Registration #908935

**MAYOR'S TECHNOLOGY COUNCIL**

City Center: MIS

**Technology Infrastructure Study**

**Business Executives**

P. Ruhlman/Muller

Jane Wood, Specwriter

October, 2001

\_\_\_\_\_ APPROVED BY CLIENT

\_\_\_\_\_ APPROVED BY PROJECT MANAGER

n=200

I.D.#: \_\_\_\_\_ (1- 6)

\*\*AREA CODE AND TELEPHONE NUMBER:

\_\_\_\_\_  
(649 - 658)

\*\*INTERVIEW TIME:

\_\_\_\_\_  
(716 - 721)

**(Ask for name from fone file)**

**(If name from fone file is unavailable, ask to speak with the CEO, President, or General Manager of Operations in Lincoln)**

Hello, I am \_\_\_\_\_ from The Gallup Organization here in Lincoln, Nebraska. Today we are conducting a brief questionnaire with business executives concerning your company's needs - especially telecommunications needs. The study is sponsored by the Mayor's Technology Council and is endorsed by the Mayor's Office and key business executives here in Lincoln.

1 Respondent available - **(Continue)**

4 No such person - **(Thank and Terminate)**

---

7 Respondent not available -  
(Set time to call back)

8 (Soft Refusal)

9 (Hard Refusal) - (Thank and Terminate) \_\_\_\_\_(1001)

---

S1. Are you the CEO, President or General Manager of your company (or Lincoln-based branch)?

1 Yes - (Continue)

2 No (Ask to speak to the

3 (DK) person that is;

4 (Refused) Reset to Introduction) \_\_\_\_\_(1002)

1. What kind of business are you in? (Open ended)

01 Other (list)

02 (DK)

03 (Refused)

04 HOLD

05 HOLD

\_\_\_\_\_  
(1301) (1302) \_\_\_\_\_

(There are no questions #2-#8)

9. About how many employees are there at your company or organization site here in Lincoln? (Open ended **and code actual number**)

9997 9,997+

9998 (DK)

9999 (Refused)

\_\_\_\_\_  
(1819 - 1821)

9a. Do you anticipate an increase, decrease, or no change in the number of employees in your company or organization site here in Lincoln over the next 5 years?

- 3 Increase
- 2 No change
- 1 Decrease

- 4 (DK)
- 5 (Refused)

\_\_\_\_\_(1846)

**(If code "1" or "3" in #9a, Continue;  
Otherwise, Skip to #9c)**

9b. What percent **[(If code "1" in #9a, read:) decrease/(If code "3" in #9a, read:) increase]** do you anticipate over the next 5 years (by 2006)? (Open ended **and code actual percentage**)

- LT Less than 1%
- DK (DK)
- RF (Refused)

\_\_\_\_\_  
(1823 - 1825)

9c. What percent of your employees spend half or more of their time on the telephone? (Open ended **and code actual percentage**)

- 000 None
- 101 Less than 1%
- 102 (DK)
- 103 (Refused)

\_\_\_\_\_  
(1826 - 1828)

10. What percent of your employees **(read and rotate A-C)?**  
(Open ended **and code actual percent**)

- 000 None
- 101 Less than 1%
- 102 (DK)
- 103 (Refused)

A. Use the Internet on a regular basis at work

\_\_\_\_\_  
(1829 - 1831)

B. Use e-mail on a regular basis at work

\_\_\_\_\_  
(1832 - 1834)

C. Use a WAN (Wide Area Network) for data transfer

\_\_\_\_\_  
(1835 - 1837)

**(If code "005-100" to ANY in #10 A-C, Continue;  
Otherwise, Skip to #13)**

11. Will your Internet and/or e-mail or data transfer needs increase, decrease or stay about the same in the next five years?

- 3 Increase
- 2 Stay about the same
- 1 Decrease
- 4 (DK)
- 5 (Refused)

\_\_\_\_\_(1838)

**(If code "1" or "3" in #11, Continue;  
Otherwise, Skip to #13)**

12. What percent **(If code "1" in #11, read:) decrease/(If code "3" in #11, read:) increase** do you anticipate in the next 5 years (2006)? (Open ended **and code actual percentage**)

LT Less than 1%

DK (DK)  
RF (Refused)

---

(1839 - 1841)

13. Please rate Lincoln's telecommunications system with regard to each of the following. Please use a one-to-five scale, where "5" is outstanding and "1" is clearly inadequate for your needs. How about **(read and rotate A-D)**?

5 Outstanding  
4  
3  
2  
1 Clearly inadequate

6 (DK)  
7 (Refused)

A. Reliability ("uptime")  
\_\_\_\_\_(1842)

B. Redundancy (backup system) \_\_\_\_\_(1843)

C. Restoration time when an outage is reported  
\_\_\_\_\_(1844)

D. Time to install new lines  
\_\_\_\_\_(1845)

**(There is no question #14)**

15. Please tell me your impression of Lincoln's telecommunications systems with regard to your company's **NEEDS FOR THE FUTURE**. Are they adequate or not for **(read A-C)**?

1 Yes  
2 No  
3 (DK)  
4 (Refused)

A. Overall telecommunications, including outbound, inbound, fax, etc. \_\_\_\_\_(1848)

B. Internet services \_\_\_\_\_(1849)

C. Large amounts of data transfer  
\_\_\_\_\_(1850)

16. What additional services in the area of telecommunications would enhance your business's potential for growth and expansion? (Open ended) **(Allow three responses)**

- 01 Other (list)
- 02 (DK)
- 03 (Refused)
- 04 None
- 05 HOLD

_____	1st Resp: (1851) (1852)	_____
_____	2nd Resp: (1853) (1854)	_____
_____	3rd Resp: (1855) (1856)	_____

17. Are you interested in receiving meeting notices and future information from the Mayor's Technology Council?

- 1 Yes - **(Continue)**
- 2 No **(Skip to Validate and Thank)**
- 3 (DK) **(Skip to Validate and Thank)**
- 4 (Refused) **(Skip to Validate and Thank)** \_\_\_\_\_(1857)

18. **(If code "1" in #17, ask:)** Please tell me your mailing address and/or e-mail address.

FIRST NAME:

\_\_\_\_\_ (1901 - 1920)

LAST NAME:

\_\_\_\_\_  
ADDRESS: \_\_\_\_\_ (1921 - 1940)

\_\_\_\_\_  
CITY: \_\_\_\_\_ (1941 - 1980)

\_\_\_\_\_  
STATE: **(INTERVIEWER NOTE: Enter "NA" if using e-mail only)** \_\_\_\_\_ (2001 - 2040)

\_\_\_\_\_  
ZIP CODE: **(INTERVIEWER NOTE: Enter "99999" if using e-mail only)** (2041) (2042) \_\_\_\_\_

\_\_\_\_\_  
E-MAIL ADDRESS: **(INTERVIEWER NOTE: Enter "NE" if NO e-mail address)** \_\_\_\_\_ (2043 - 2047)

\_\_\_\_\_  
(2112 - 2151)

**(VALIDATE PHONE NUMBER AND  
THANK RESPONDENT BY SAYING:)**

Again, this is \_\_\_\_\_, with the Gallup  
Organization of Lincoln, Nebraska. I  
would like to thank you for your time.

Our mission is to "help people be  
heard" and your opinions are important  
to Gallup in accomplishing this.

INTERVIEWER I.D. #: \_\_\_\_\_ (571-574)



# **Chapter 5: Technology Audit**

HDR is working with the Technology Council. An overview of HR as well as the scope of services and specifications for Request of Services is included in this section.

# Overview of HDR

HDR, Inc., founded in 1917, is an employee-owned, full service consulting firm with more than 80 years of experience and annual sales of nearly \$400 million. The firm currently has 3,033 professionals representing more than 50 disciplines in 60 offices, including Omaha and Lincoln, Nebraska. Our clients are located in all 50 states and 48 countries. HDR works primarily with government agencies and not-for-profit organizations. Our for-profit clients are based largely in the railway, healthcare and microelectronic manufacturing fields. We strongly relate to a prescribed set of values, keen vision and a full commitment to mission.

## HDR Mission Statement

Our mission is to strengthen the competitive position of the clients we serve through the provision of ideas, strategies, and solutions grounded in the creative application of skills derived from operations, planning, technology, engineering, economics, science, human and organizational performance, as well as socio-political disciplines without compromise to the environment.

## Project Understanding

The New Economy is a term that attempts to explain the fundamental changes that are taking place in the national and international economy. The New Economy is being driven by complex factors – globalization, investment opportunities, information technology, and knowledge workers. People, communities, cities, counties, and nations that are successful in the New Economy have learned how to exploit the opportunities that come from using technology in new and exciting ways.

The New Economy is also changing the rules of competition and economic development for communities. Time honored programs, processes, and the understanding of how to market a community for business relocation and retention has changed. The information technology revolution has changed the ground rules – yet most do not recognize a fundamental shift has taken place. In the New Economy, traditional assets like ports, highways, and rail do not produce competitive advantage it did in the past. In today's technology dominated economy, it is imperative for communities to analyze their competitive position, their strengths and weaknesses.

So how have communities around the nation benefited in the New Economy? If it were boiled down to essentials, they have been successful because they are capitalizing on the unique capabilities that fuel information age businesses – arts programs, knowledge workers skilled in graphics and design, high education levels, outdoor amenities and others. The result has been that in places, like the Silicon Valley, Denver, Austin, and Boston the technology revolution has created an economic development renaissance. ***There is one more common theme that has***

*defined the successful communities in the New Economy; they also possess the technology infrastructure, and service providers to enable technology-based businesses to thrive.*

This technology infrastructure, or networks speed business processes, cut costs, open markets, and provide people with access to information and services twenty-four hours a day, seven days a week. Voice, video and data services are merging. Communities need a choice of communications providers, each of which offers a full service bundle of local and long distance telephony, digital cable television, wireless services and high-speed Internet access.

In smaller cities around the nation and those outside major metropolitan areas, the investment in advanced telecommunications networks is happening at a much slower pace, or not at all, leaving communities wondering how they will be able to maintain a healthy local economy. Due to the gravity of the situation, communities are understanding that they must begin to *manage* complex telecommunications issues and change their role from one that strictly regulates telecommunications companies to one that is committed to ensuring the broad availability of advanced communications services, competition and high-quality service.

HDR Management Consulting has developed a response to Lincoln's RFP for a community wide technology infrastructure audit that addresses the community's need to evaluate its current telecommunications infrastructure, assess how the community can benefit from additional telecommunications services, and finally identifies key action initiatives the community can implement to improve its competitive advantage. The HDR team brings a broad experience to Lincoln to complete this work.

Sidebar: Communities that leverage "knowledge assets" like universities and technology research centers will be the most successful in the New Economy.

## I. Project Approach

Successful communities in the New Economy embrace new technologies; they move quickly and adapt to change; they provide hospitable environments for knowledge workers and entrepreneurs; and they foster networking among community leaders and businesses. Lincoln has taken several steps to improve its climate for retaining and attracting technology companies by developing cooperative ventures like the Partnership for Economic Development and the Technology Park at the University. These cooperative ventures are important for Lincoln to build on to better position itself as a premier location for technology related industries to locate and do business.

While Lincoln is achieving a great deal in creating collaborative ventures to attract technology companies, there is a perception that the community lacks the physical technological infrastructure it needs to compete. A recent move by the Gallup Organization to another community focused attention on this issue. In response, the Mayor of Lincoln formed a Technology Council that has been successful in raising the

awareness of technology issues in the community and has begun to educate the community on the need to focus on this important issue. So the question becomes, how can the community assess and ultimately improve its technology infrastructure to gain competitive advantage in the New Economy? The HDR project approach has been specifically developed to answer the question from a social, economic, and technology perspective.

**Sidebar:** The ideal place to locate a start-up is a metropolitan area that's an academic research and development center with a young, highly educated, diverse work force. It also should have an affordable cost of living, year-round livability and a progressive view toward entrepreneurship. (Wall Street Journal)

**Sidebar:** The Technology Council has an important role in this project, they will work with HDR to design the audit process and finalize the project schedule. The Technology Council will represent the broad interests of the community, provide valuable insight and background to the HDR team, serve as a sounding board for HDR, and guide the final report, conclusions, and recommendations.

HDR proposes to build upon and leverage the current information base and existing data collection efforts by Gallup and others. We recommend that the Technology Council serve as the project steering committee for this assessment project. This will allow HDR to benefit from the knowledge and information the Technology Council has already gained, ensure that broad community interests are considered, and provide HDR a diverse group to consult with on the project process and goals.

HDR understands that local governments are in a unique position to bring together the economic and social sectors of a community to address a priority issue, like advanced telecommunications services. HDR proposes that the City continue to emphasize the importance of improving the community's competitive position, support the Technology Council and continue to be the glue that holds together the community's diverse needs and goals. The support of the City in this project is essential to it being successful.

An important part of the overall project is the community assessment process designed by the Computer Systems Policy Project (CSPP). This approach was specifically developed to help communities become more competitive in the New Economy by helping to determine how prepared a community is today, where improvements can be made and specific action initiatives for making improvements. The assessment process analyzes the community from a broad perspective, looking at technology infrastructure, how organizations are currently connected, how organizations use technology today for their competitive advantage, and evaluates the overall technology environment. The CSPP process is producing results in other communities similar to the City of Lincoln, for example:

- I. Ashland, OR – high-tech businesses relocated to City/Organizations got “connected”.

- II. Kern County, CA – The County developed telecommunications services availability maps to help attract high-tech businesses.
- III. Mesa, AZ – Developed a new strategy for ensuring economic development investment zones are well served for telecommunications services.
- IV. Santa Clarita, CA – Telecommunications companies accelerated their investment in DSL, cable modem and wireless broadband technologies.
- V. Sarasota County, FL – Developing a strategy for completion of community-wide network to connect governments, non-profits, education, and health care.
- VI. Stanislaus County, CA – Obtained investments by new telecommunications companies.

HDR and Connected Communities of Menlo Park, CA are the only known firms in the United States that has experience using the CSPP process in the local government setting. HDR and Connected Communities are working on an assessment in the Central Valley of California that includes nine counties. Mike Freeman of HDR has worked with Connected Communities on other similar projects as Lincoln's. HDR has teamed with Connected Communities on this project to provide broad experience and seamless implementation of this assessment tool.

Sidebar: "Cities under 500,000 in population who are emerging as the new winners in the New Economy have several distinct advantages for knowledge workers, entrepreneurs, and businesses – lower cost of living, a supportive business environment, and often a concerted, coordinated effort to attract technology based businesses by government, the Chamber of Commerce and others." Knowledge Value Cities in the Information Age – Joel Kotkin & Ross DeVol

# Scope of Services

In response to the City's request for proposal, HDR Management Consulting has developed a process to help the community meet its goals of creating a competitive environment for the community to better retain and attract technology related businesses, ultimately impacting economic development. It is HDR's belief that the recommended process is a rational, effective way for the community to make improvements to its technology infrastructure and improve its competitive advantage. The methodology that HDR proposes has a proven track record in other communities and improvements are being realized – the same can happen in Lincoln. But, we also realize that there may be changes or modifications to the process to customize this effort for the community that may be requested. HDR is open to these suggestions and plans on having an initial meeting with the Technology Council to develop a mutually agreed upon scope of services.

HDR's proposed process has three basic elements: project formation, the audit or assessment phase, and the final report. This process will serve as a means for the community to evaluate its current standing, understand potential improvements that must be taken, and understand the most viable options for creating competitive advantage for Lincoln.

## Phase I – Project Initiation/Team Formation

Given the demands placed upon any organization that is preparing to begin an assessment project, it is important to carefully plan the process. A clear understanding as to where that journey will begin, where it should end, and the steps in between must be established and agreed upon by all stakeholders.

The first task is to form the project steering committee whose role is to work with the HDR staff to finalize the project plan and key milestones. At this point, it is envisioned that the Technology Council will serve in this role. When the steering committee is formed, the HDR project team will conduct a workshop with them to set the course of the project.

Sidebar: HDR proposes to utilize the Technology Council as the project steering committee. This will ensure that HDR has a broad based community stakeholder group to receive input and guidance from.

### Phase I Assumptions

- I. The City and HDR will be able to begin working on the project in November 2001 and complete the project by February, 2002.
- II. HDR will work with the City's Technology Council to design the overall process, identify key milestones, and agree on overall project deliverables.

## Phase I Deliverables

- I. Completed scope of work.
- II. Completed project scheduling.

## **Phase II – Assessment – Audit of Existing Infrastructure**

Understanding the present is essential to envisioning the future. The assessment phase of the project is designed to tell the community where it stands today. This part of the project will answer key questions such as, how well served is the community by existing telecommunications companies, what kinds of services are needed, what types of programs could the community adopt to improve its competitive position, and what kinds of initiatives will the community support moving forward with.

The second phase of work includes gathering specific information on the current state of Lincoln's technology infrastructure, conducting a community workshop on telecommunications issues, developing telecommunications availability maps, performing a baseline economic assessment and reporting to the project steering committee on initial findings. The assessment phase is designed to provide baseline information to HDR on the community's current situation. The information that comes from the assessment will provide the framework in which HDR project team will analyze Lincoln's capabilities, gaps, future needs, and develop overall recommendations.

### **Technology Infrastructure Analysis:**

An essential element of the project proposal is to gather baseline information on the City's existing technology infrastructure. This information is essential to completing the other portions of the assessment. The following is information that will be reviewed:

#### **Infrastructure**

HDR will broadly assess the community's technology infrastructure, including identifying the key telecommunications providers, their services, service availability, and reliability.

#### **Telecommunications Infrastructure Availability/Usage Assessment**

HDR will assess the community's current and future telecommunications requirements in the following economic sector areas:

- I. Business
- II. Government
- III. Residents
- IV. Community Based Organizations
- V. Schools
- VI. Higher Education
- VII. Libraries
- VIII. Health Care

HDR will use a combination of personal interviews, phone interviews, and information from the community workshop to gather this data.



## Community Assessment:

The community assessment is designed to bring together the key economic sector groups in Lincoln to assess the community's existing telecommunications infrastructure, how organizations are using technology, to create a vision for the future, and the identification of action initiatives to move the community toward its vision.

As previously discussed, the HDR project team proposes using an assessment process developed by the Computer Systems Policy Project (CSPP), the *Living in the Networked World Assessment Guide*, as the framework for the workshop. The measures generated by this program will create a benchmark for future progress. Participants will also describe their vision for the community and identify potential action initiatives to improve Lincoln's competitiveness that the community will support working on.

Sidebar: The Computer Systems Policy Project was founded in 1989. It is an affiliation of CEOs in the computer systems industry advocating positions in trade and technology policy on behalf of the industry. The CSPP's current issues include export controls, Internet taxation, encryption, international trade, and electronic commerce. For more on the CSPP see [www.cspp.org](http://www.cspp.org).

Sidebar: A sample listing of communities that have used the CSPP guide to improve their economic competitiveness:

Ashland, OR (population 20,000)  
Bowling Green, KY (population 50,000)  
Colorado Springs, CO (population 450,000)  
Jackson County, OR (population 270,000)  
Kent, WA (population 80,000)  
Kern County, CA (population 660,000)  
Mesa, CA (population 400,000)  
Redondo Beach, CA (population 70,000)  
Santa Clarita, CA (population 150,000)  
Sarasota County, FL (population 325,000)  
Sonoma County, CA (population 450,000)  
Stanislaus County, CA (population 445,000)

Communities have used the CSPP approach for a variety of reasons, but, in general, they fall into one or more of the following categories:

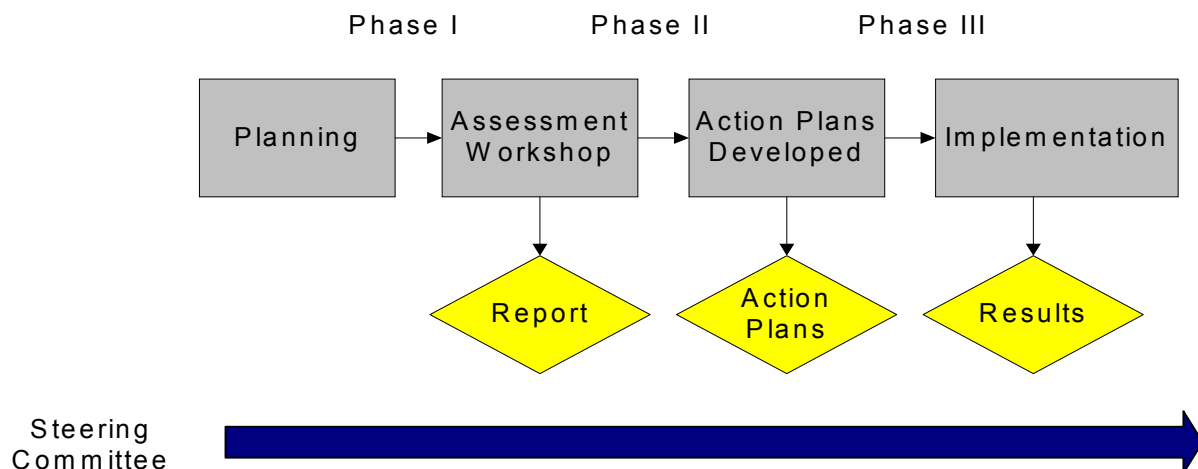
- I. Develop a community leadership team that focuses on technology related economic development.
- II. Build a shared understanding of the links between advanced telecommunications and economic development.

- III. Learn about local visions for how new services can make a difference in education, business, government, community-based organizations, and other sectors.
- IV. Create an easy-to-understand report on where the community stands.
- V. Set one-year goals for advancing the region's information infrastructure.
- VI. Generate ideas for action initiatives that move the community forward and take advantage of the next generation of telecommunications services.

Following the CSPP process, communities typically begin to see the following types of improvement in their competitive position:

- I. New telecommunications firms invest in the community.
- II. Existing telecommunications firms either decide to begin to offer high-speed services or they speed up their process of upgrading their backbone systems.
- III. New companies become interested in the community.
- IV. The community begins to speak with a consistent voice about its vision and goals for telecommunications services.
- V. New collaborations form in developing new approaches to making the community more competitive.
- VI. Individual organizations, i.e. businesses, government, health care, etc. become more knowledgeable about advanced technologies that improve their products, services, and operations.
- VII. The community becomes more competitive overall to retain and attract technology based businesses.

**Sidebar:** the CSPP process.



### **Step 1. Planning Meeting**

HDR Management Consulting will work with Lincoln and the project steering committee to plan the assessment workshop. The project steering committee members should represent government, the business community, educators, libraries, telecommunications services providers, and other key sectors in the City's economy.

At its first meeting the project steering committee will:

- Plan the assessment workshop, customizing the process to meet local needs.
- Issue invitations to participate in the assessment.
- Identify potential presenters.
- Identify the key economic sectors.
- Identify any special issues.
- Learn how to use the assessment tool and lead sector workshops.

### **Step 2. Assessment Workshop(s)**

The project steering committee will decide if the assessment should be done in one workshop or multiple sessions. Each sector team will use the CSPP *Guide* to conduct their assessment and report back to the other teams and the steering committee. Each team will discuss its vision for a connected community, and ideas for action initiatives. Steering committee members will provide leadership for these sessions.

### **Lincoln Workshop Requirements**

- Develop a list of people to invite to join the planning committee. HDR Management Consulting will review the list to ensure it includes a good representation of key communities and sectors.
- The City and project planning committee will be responsible for identifying people to invite to the workshops, issuing invitations and following up to ensure participation.
- Work with HDR Management Consulting to identify what data needs to be collected in advance of the workshop, and ensure that the data is available to participants.
- Arrange for meeting rooms, refreshments, nametags, and sign-in sheets.
- Provide flip charts and a computer projector for presentations.

### **Step 3. Prepare Draft Report**

HDR Management Consulting will prepare a draft assessment report of approximately 15 to 20 pages for the project steering committee. The report will outline the findings from the community workshop and how each area reviewed is important, where the community stands, and what needs to be done to achieve the vision.

## **Mapping**

Following the community workshop, HDR will focus on compiling the information generated in the first part of Phase II and will begin synthesizing the information into manageable parts. One of the important components of this project is creating a

service availability map for Lincoln. The map will serve as important resource for the community depicting the availability of advanced services for residences and businesses.

This map will be created in a format that is compatible with Lincoln's GIS system. HDR will work with the City's project team prior to the map being developed to ensure that the data is appropriate for the for the community.

## **Economic Analysis**

HDR will conduct a baseline analysis of the City's economy to determine its current and future telecommunications requirements. This analysis will focus on what kinds of services are needed today and what kinds of services will be required in the future to retain existing businesses as well as attract new businesses to the community. It is HDR's experience that there are several key areas that require evaluation, it is HDR's plan to evaluate each of the following dimensions:

- I. New start-up technology companies
- II. Technology companies who have re-located to the area
- III. Education programs for improving and enhancing high-tech skills
- IV. Programs designed to attract technology companies
- V. Partnerships designed to strengthen the communities competitive advantage

The finding of the economic assessment section will be combined with information and findings from other portions of the assessment process to provide a sound basis for making recommendations for improvements.

Based upon HDR's experience, it is not necessary to conduct a detailed economic analysis to make improvements in a community's competitive position. The economic forces of the new economy are rapidly changing the business environment and trying to collect, then analyze data in this dynamic environment often produces less than desired results. It is HDR's opinion that baseline economic data can be gathered in a straightforward and efficient way that will greatly aid in the audit process. Please reference the attached cost proposal that indicates our assumptions and alternatives for this portion of the audit.

### **Phase II Assumptions**

- I. The City and project steering committee will assist in helping HDR in locating background information.
- II. It is HDR's belief there is a diminishing return on investment when gathering baseline technology infrastructure information. Therefore, HDR will work with the City and project steering committee to collect information that truly supports the audit process and the final project goals.
- III. The City and project steering committee will assist HDR in planning the community assessment workshop.

- IV. The City and project steering committee will work with HDR to develop the telecommunications service availability map.
- V. The City will work with HDR to plan for a meeting with the project steering committee to discuss preliminary findings.

#### Phase II Deliverables

- I. Collection of baseline information on the City's telecommunications infrastructure.
- II. Completion of a community workshop to assess where Lincoln is today and what kinds of services it needs to improve its competitive position.
- III. The creation of a telecommunications service availability map.
- IV. Collection of key economic information on the City.
- V. A meeting with the Technology Council to present preliminary findings and to get feedback in preparation for drafting the final report.

#### Phase II Alternative Services

The City may choose for an additional fee to have any of the following added services performed:

- I. Assessment of the City's technology infrastructure and backbone.
- II. Additional mapping beyond the baseline service availability map.
- III. Additional analysis on the City's economic condition.
- IV. Assistance in developing a strategy for how the City government can best take advantage of advanced communications services.
- V. Additional community or economic sector meetings.

#### Phase II Assumptions

- I. Given the amount of work the Technology Council has already done, it is expected that a great deal of the baseline information needed in Phase II will be readily available.
- II. The Technology Council will assist in preparing for the Community Workshop.

## **Phase III – Summary and Conclusions**

In the final phase of work, HDR will compile the information generated in the assessment process and develop a report that will address the six key themes outlined in the RFP. The report will be organized to include the following information:

- I. An inventory of the technological infrastructure.
- II. Market demographics.
- III. Inventory of technologies needed to retain and attract new businesses.
- IV. Data on comparable communities.
- V. Outline of marketing efforts of comparable communities.
- VI. Discussion of how technology expansion may affect other aspects of the City.
- VII. Recommendations for improving Lincoln's competitive advantage.
- VIII. Recommendations on next steps.

HDR will work with the City and project steering committee to finalize the report. The final step will be presenting the completed report to the Lincoln City Council and community.

### **Phase III Assumptions**

- I. City staff and the project steering committee will be accessible to HDR to review the final report.
- II. City staff will work with HDR to plan for a formal presentation to the City Council and community.

### **Phase III Deliverables**

- I. HDR will produce a final report for Lincoln.
- II. HDR will schedule a presentation to the City Council and community following completion of the study.

### **Phase III Responsibilities of the City**

- I. Work with HDR to schedule a presentation of the final report to the City Council.

## **SPECIFICATION NO. 01-183 REQUEST FOR PROPOSALS**

The City of Lincoln, Nebraska intends to enter into a contract and invites you to submit a sealed proposal for:

### **COMMUNITY WIDE TECHNOLOGY INFRASTRUCTURE AUDIT**

Sealed proposals will be received by the City of Lincoln, Nebraska on or before 12:00 noon **Wednesday, October 3, 2001** in the office of the Purchasing Agent, Suite 200, K Street Complex, Southwest Wing, 440 South 8th Street, Lincoln, Nebraska 68508. Proposals will be publicly opened at the K Street Complex Conference Room, reading only the names of the firms submitting proposals.

Submitters should take caution if U.S. mail or mail delivery services are used for the submission of proposals. Mailing should be made in sufficient time for proposals to arrive in the Purchasing Division, prior to the time and date specified above.

# REQUEST FOR PROPOSAL COMMUNITY WIDE TECHNOLOGY INFRASTRUCTURE AUDIT

## 1. PROJECT UNDERSTANDING

- 1.1\_ The purpose of this RFP is to study the technological environment of the City of Lincoln to include but not limited to downtown and within three (3) miles of the corporate limits of the City, addressing current and potential competitiveness to ensure a successful future of the community.
- 1.2\_ This study is to evaluate the technology as it relates to existing infrastructure and recommend all available options for all the different technologies available.
- 1.3\_ Our intent is to obtain an evaluation of the Lincoln area's ability to maintain present business and to draw business in the future; evaluate the current infrastructure's ability to service potential business and maintain existing business; and lastly, if the evaluation determines the current infrastructures to be inadequate, define the type of infrastructure required to maximize the City's potential.
- 1.4\_ Firm shall analyze and identify trends such as growth and usage.
  - 1.4.1 Provide future projections, trends, and assessments of the technology and the community's capacity through 2010 and beyond.
  - 1.4.2 Identify Lincoln's strengths, weaknesses, and unique opportunities for the future.
- 1.5 The selected firm should specialize, and have experience in technological infrastructure analysis for cities our size and demographic.
- 1.6 The goal is to provide information, collected and analyzed in an objective, accurate and statistically valid manner needed to set priorities and funding now and the future.
- 1.7 This study may also ascertain shifts in technology and its availability.
- 1.8 The study may also show shifts in public opinions regarding technology and its role within the community.
- 1.9 The analysis should include, but not limited to the following:
  - 1.9.1 Inventory of all technological infrastructure within the community.
  - 1.9.2 Market demographic characteristics.
  - 1.9.3 Type and mix of technology that can be used to attract or keep businesses in the City.
  - 1.9.4 Existing competing communities (state, regional & national).
  - 1.9.5 Performance of comparable communities in other areas of the country.
  - 1.9.6 Marketing efforts of comparable cities in other areas of the county.



- 1.9.7 Determination of how any expansion of our technology may affect other aspects of the City.

## 2. REPORT PROCESS

- 2.1 The report is to be presented in the form of narratives, supported by statistical data for each of the six component tasks (1.9.1 - 1.9.7).
  - 2.1.1 The order of presentation is to reflect the chronological order of execution.
  - 2.1.2 The study is to begin with an evaluation to determine what type of technology, if any, exists today.
  - 2.1.3 Does the present and future growth in population and economic base support future expansion?
- 2.2 Current technology users are to be contacted to provide insight into the demand for additional technology for the community.
  - 2.2.1 National and Regional businesses are also to be contacted to determine if they would be interested in Lincoln if additional and/or renovated technology was available.
  - 2.2.2 Successful firm shall include lost business opportunities to the City.
  - 2.2.3 Other nearby communities are to be compared to Lincoln regarding available technology, population base, and economic situation.
- 2.3 The economic impact of the current and future needs to be developed and the engineering response to the market demand needs to be identified.
  - 2.3.1 The primary economic impact would be construction costs.
  - 2.3.2 A secondary impact would be operation and maintenance of the technology.
  - 2.3.3 The increased usage of the technology would result in the positive economic impact generated in the Lincoln area.
  - 2.3.4 This impact should be measured through the use of surveys conducted within the community and regionally.
  - 2.3.5 Surveys should show the dollars left in the community as a direct result of technology available within the community.

## 3. SCOPE OF WORK

- 3.1 The Consultant shall clearly describe the scope of services he or she would propose.
  - 3.1.1 Include details of your approach and your work plans.
- 3.2 A brief statement must be included which explains why your approach and plan would be the most effective and beneficial for the City.
- 3.3 The scope of the work can generally be categorized into 3 Phases.
  - 3.3.1 **Phase I** - Review of existing technology and service areas
    - 3.3.1.1 The Consultant selected shall advise the City's staff in the review of the current system/s.
    - 3.3.1.2 Such advice shall include, but not be limited to, whether and how to conduct any necessary

- audits of the system/s and services within the community.
- 3.3.1.3 This audit shall include but not limited to DSL, Cable, DS3, T-1, and OC 3/12 lines.
- 3.3.1.4 Audit shall include the service areas within the community for each of the lines within 3.3.1.3
- 3.3.1.5 Audit shall include the utilization of each of the lines within the service areas.
- 3.3.2 **Phase II** - Future Needs Assessment
  - 3.3.2.1 The Consultant selected shall advise the City's staff in its determination of the future needs of the community.
  - 3.3.2.2 Such assessment shall involve an examination of the future needs of 1) The Public, 2) City Government, 3) Current Businesses, and 4) Future Businesses.
  - 3.3.2.3 The Consultant will take a leading role in planning and conducting such assessment.
- 3.3.3 **Phase III** - Cost Estimates.
  - 3.3.3.1 The Consultant shall submit estimated cost for a variety of scenarios such as do nothing, expand community wide, expand only in certain areas of the community or other options available.

#### **4. RELATED SERVICES**

- 4.1 In all aspects and phases of the scope of work, the Consultant selected shall present options for the City to consider in deciding the final scope of work.
- 4.2 The Consultant's proposed scope of work and related options shall include a consideration of current and future technological advances.
- 4.3 The Consultant shall make recommendations on the possibilities relating to:
  - 4.3.1 Fostering competition within Lincoln and options available to the City to accomplish it.
- 4.4 The Consultant may be required to attend City Council briefings and hearings related to the consideration of the audit.
- 4.5 The Consultant may also be required to take part in presentations before other potential stakeholders.
- 4.6 The Consultant shall assist the City's legal counsel in the preparation of any legal documents necessary to enhance the communities future.
- 4.7 The Consultant shall be available to discuss any aspect of the audit process by phone or in person with the City's team, as requested.
- 4.8 The Consultant shall prepare a budget related to the total scope of work to be submitted to the City of Lincoln prior to beginning Phase I.

## **5. PROPOSAL AND ESTIMATE OF COST**

- 5.1 Proposals should identify any elements of the scope of work that Consultant feels should be added to the above areas.
- 5.2 Proposals should be as comprehensive and detailed as possible in its description of services and costs.
- 5.3 The Consultant's proposal shall identify and provide the qualifications of any principals and employees who will be providing services under the Scope of Work identified above.
- 5.4 The proposal shall provide detailed information on the prior experience of the principals and any employees providing the services.
  - 5.4.1 Shall also include the firm's current workload and ability and willingness to commit the key personnel to this project and proposed schedule.
- 5.5 The proposal shall also list three or more referrals from individuals or other governmental agencies in which technological audit was done.
- 5.6 The proposal shall include the standard hourly rates for each individual listed and an estimate of the total cost of the services to be provided under the above Scope of Work.
- 5.7 The method for compensation for consulting services shall be on a "fee for service" basis only.
- 5.8 The proposal shall divide the total cost of services by the various tasks in the Consultant's proposal and should include, at least, the following broad categories:
  - 5.8.1 Review the current technology.
  - 5.8.2 Recommendation to the community's current and future needs
  - 5.8.3 Other necessary costs including printing and postage, travel and lodging, and other as specified in the proposal.
  - 5.8.4 Briefly describe your firm's general approach to this project (use exhibits if appropriate).
  - 5.8.5 A tentative time schedule identifying significant mile stones throughout the comprehensive multi-phase study process.

## **6. NATURE OF THE PROPOSED RELATIONSHIP**

- 6.1 The successful proposer will be hired by the City on a contractual basis and will perform the services required as an independent contractor and shall not be deemed an employee of the City.
- 6.2 The Consultant will be responsible for payment of all his own payroll taxes, and payment of all withholding amounts, including, but not limited to, state and federal income taxes, FICA, FUTA, and other payroll taxes.
- 6.3 It is anticipated the services will be performed personally by the Consultant and that neither the services nor the contract will be delegable without the express written consent of the City.

## **7. CONFLICT OF INTEREST**

- 7.1 The Consultant's proposal must provide assurance that the Consultant has no conflict of interest, including but not limited to, other projects, or

independent contracts, and the Consultant must agree to not acquire any, such conflicting interest during the agreement, either directly or indirectly, which would in any manner or degree conflict with the performance of services to be provided under the Scope of Work.

## **8. DEADLINE**

- 8.1 Ten copies of the Consultant's proposals must be submitted to the City of Lincoln Purchasing Department, 440, South 8th Street, Suite 200, Southwest Wing, Lincoln, NE 68508 by 12:00 noon, August 3, 2001.
- 8.2 The proposals will be reviewed by the City representatives and a Consultant selected shortly thereafter.
- 8.3 Any questions regarding this Request for Proposals should be directed to Vince M. Mejer, CPPO, C.P.M., Purchasing Agent's office, 440 South 8<sup>th</sup> Street, Suite 200 , phone (402)441-8314. E-mail address [vmejer@ci.lincoln.ne.us](mailto:vmejer@ci.lincoln.ne.us).

## **9. PROGRAM**

- 9.1 To meet with project representatives to review existing infrastructures
- 9.2 Work with the client to further develop and document programming data as required.
- 9.3 This is to include:
  - 9.3.1 Description of major players and their present uses.
  - 9.3.2 Identification of user capacity of each type of technology and where they are located within the community.
  - 9.3.3 Determination of the adequacy of each for it's intended use.

## **10. ASSUMPTIONS**

- 10.1 This study will not be restricted to any one company or entity.
  - 10.1.1 It will test the overall feasibility of any analysis or proposed solutions.
- 10.2 The City representatives will be accessible to the Consultant and will be expeditious in the decision making process.

## **11. CONSULTANTS/SPECIAL SERVICES**

- 11.1 Consultants as described above will be selected in conjunction with the client for this study.
  - 11.1.1 If further engineering studies are required, they are to be treated as an additional service.

## **12. SUPPLEMENTAL SERVICES COMPENSATION**

- 12.1 If required will be invoiced on an hourly basis in accordance with the Respondent's rate schedule.

## **13. SCHEDULE**

- 13.1 Proceed upon City written authorization.
  - 13.1.1 Completion of work to be within 100 days of commencement of the work.

- 13.2 Any unreasonable delays in completion caused by others will require additional compensation.

**14. METHOD OF PAYMENT**

- 14.1 All payments due shall be made monthly upon presentation of the statement of services rendered.

**15. INFORMATION REQUIRED IN RFP**

- 15.1 All statements of qualifications should contain at least the following general and specific information:
  - 15.1.1 A brief general history of the firm or individual demonstrating integrity, capability and experience.
  - 15.1.2 In the case of joint ventures, an organizational outline of each member's proposed assignment and duties.
  - 15.1.3 A listing of other issues that your firm or team has assisted in as a senior manager in the past three years, and which are comparable in size and scope.
  - 15.1.4 Discuss your ability to provide the services required.
  - 15.1.5 A listing of the specific individuals who would be assigned to this project, their qualifications, experience, present workload, and availability to provide the services.
  - 15.1.6 A listing of any special approaches, or additional services that your firm would propose to offer.
- 15.2 The City also reserves the right, at its sole discretion, to request additional information.
- 15.3 Include a copy of a similar report from a past project.

**16. QUALIFICATIONS**

- 16.1 Documented success in this type of project.
- 16.2 Documented experience in organizing and leading successful projects of this size and scope.
- 16.3 Ability to make oral presentations to civic groups and other audiences.
- 16.4 Ability to prepare printed materials used in fund raising.
- 16.5 Ability to work a non-traditional and flexible work schedule including weekends and evenings.
- 16.6 Active membership in related professional organizations.

**17. AWARD OF CONTRACT**

- 17.1 The City reserves the right to accept or reject any or all proposals.
- 17.2 The City reserves the right to select the firm or team most responsive to this Request for Proposal, or which it otherwise concludes will do the best, most cost effective job for them.
- 17.3 The City reserves the right to negotiate fees and services submitted.
- 17.4 A Contract may be negotiated with the contractor whose proposal is determined to be most responsive to the City's needs and most advantageous.

- 17.5 Award of a contract may be made without discussion after proposals are received.
  - 17.5.1 Proposals should, therefore, be submitted initially in the most favorable terms, from both price and technical perspectives.

## **18. PACKAGING**

- 18.1 Respondents are encouraged to submit clear responses to the RFP.
- 18.2 Due to the need for an expedited review of proposals and contractor selection, Respondents are cautioned against submitting excessive and extraneous material not directly responsive to the issues raised in the RFP.
- 18.3 Each proposal must be sealed to provide confidentiality of the information prior to the submission date and time.
- 18.4 The proposal shall be firmly wrapped and securely sealed, addressed to the Purchasing Agent as in Legal notice and clearly marked "**PROPOSAL FOR TECHNOLOGY AUDIT**".
- 18.5 The City will not be responsible for premature opening of proposals not properly labeled.
- 18.6 Fees shall be in a separate sealed envelope.
  - 18.6.1 Only one fee envelope is required.

## **19. DULY AUTHORIZED SIGNATURE**

- 19.1 The proposal must contain the signature of a duly authorized officer or agent of the Respondent's organization, empowered with the right to bind the Respondent.
- 19.2 The Respondent must also provide evidence of the authority of the officer or agent to bind the Respondent.

## **20. RESPONDENT RESPONSIBILITY FOR PROPOSAL COSTS**

- 20.1 The City is not liable for any cost incurred by Respondent associated with the preparation of a proposal or the negotiation of a contract for services prior to the issuing of the contract.
- 20.2 The City is also not responsible to any successful bidder for any costs associated with the preparation of a proposal or the negotiation of a Professional Services Agreement.

## **21. PROPOSALS BINDING**

- 21.1 Respondents are advised that proposals shall be binding upon the Respondent for ninety (90) calendar days from the proposal due date.
- 21.2 All material provided to the City during the RFP process and contract negotiation and administration should be expected to be used without restriction by the City in the future.
- 21.3 In the event that a proposal is rejected, the City reserves the right to use any of the concepts or ideas contained in the proposal without incurring any liability.

## **22. NOTIFICATION**

- 22.1 Each Respondent submitting a proposal in response to this RFP will be notified in writing as to the acceptance or rejection of its proposal.
- 22.2 The City expects to release such letters within ninety (90) days of the proposal submission date.
- 22.3 The City may delay this action if it is deemed to be in the best interests of the City.

## **23. EVALUATION PROCESS**

- 23.1 The evaluation team will use all facts, information, and data available to finalize its evaluation.
- 23.2 On the basis of the technical and cost response to this RFP and subsequent evaluation activities, the selection team will look to select one (1) contractor to provide the required services of this RFP.
- 23.3 The City reserves the right to reject any and all proposals.
- 23.4 Failure of the Respondent to provide any information requested in this RFP may result in disqualification of the proposal.
- 23.5 The evaluation team's sole objective will be to recommend the award of a contract to the Respondent whose proposal is most responsive to the City needs and most advantageous to the City considering cost as well as other factors based on evaluation criteria described below.
- 23.6 Proposals will be judged on the information provided in the proposal submission or provided in response to interview questions, if interviews are conducted.
- 23.7 The following criteria will be used to evaluate the proposals:
  - 23.7.1 Ability to Undertake the Scope of Services
  - 23.7.2 Financial Status of the Respondent
  - 23.7.3 Level of Experience and Credentials of the Project Team or Individual
  - 23.7.4 Experience with Governmental Entities and Their Respective Benefit Plans
  - 23.7.5 Fees, Estimated Expenses and Timeliness
  - 23.7.6 Creativity
  - 23.7.7 Oral Presentations (if requested)

# **Chapter 6: Next Steps**



## *Mayor's Technology Council*

### *Next Steps*

The mission of the Technology Council is to lead the City of Lincoln and bring together the public, private, and education sectors to enhance the community's core technology strengths and infrastructure to achieve a competitive advantage for Lincoln as a leading city for technology based businesses and to promote economic development.

In order to achieve this mission, the Technology Council recommends the following steps:

1. Establish entity through which leadership, vision and coordination of mission is provided with ongoing continuing financial support. This includes:
  - a. Champion - a person with a unique set of skills to affectively work with the university, business and government.
  - b. A permanent office for Champion and support staff.
  - c. Organization is inclusive and has broad community-wide membership.
2. Secure funding to support this endeavor. Examples of methods of funding are:
  - a. Inter Local Agreement (use Antelope Valley as a model)
  - b. Bonding Authority
  - c. Establishment of a designated entity for purposes of accountability.
3. Form Council to provide direction and oversight.
  - a. The charge of the Council includes
    - i. Integrate outcomes of Technology Audit into overall effort.
    - ii. Monitor progress and implementation of strategies
    - iii. Assist with integration of the three elements - university, private sector, public sector.
    - iv. Review where we are and recommend what is to be accomplished.
  - b. It is recommended that membership be made up of one representative from each strategy team
4. Implement an education process for the community.
  - a. The short-term goal is to reach key players from university, business sector, government.
  - b. The long-term goal is to create an informed and involved community.
  - c. Methods to meet education goals include:
    - i. Schedule monthly gatherings at which representative from each strategy do presentations to share information and to create networks. Salt presentations occasionally with someone from outside.

- ii. Establish a “Clearing House” to collect and disseminate good news to the community.
- iii. Use 5 City TV (Cable Channel 5) as a means of communicating with the community.
- iv. Use City website as a means of reaching the “community.”
- v. Ask Leadership Lincoln to include the new economy as an educational component of its Executive Series.

# Appendices

Steering Committee .....	i
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Resource Team .....	iii

City of Lincoln  
**MAYOR'S TECHNOLOGY COUNCIL**

**Co-Chairs:**

Bill Johnston, Lincoln Journal Star  
Ed Paquette, University of Nebraska Alumni Association

**Steering Committee:**

Mark Bowen, City of Lincoln  
Steve Bowen, Quantum Electric  
John Brasch, Senior Technologies, Inc.  
Cliff Dale, Lincoln Public Schools  
Chuck Henderson, University Technology Park  
Jack Huck, Southeast Community College  
Steve Kiene, MindVision Software  
Mark LeBaron, Lincoln Chamber of Commerce  
Lori McClurg, State of Nebraska  
Kim Robak, University of Nebraska System  
Phil Ruhlman, The Gallup Organization  
Rich Sincovec, UNL Computer Science & Engineering College

# City of Lincoln

## MAYOR'S TECHNOLOGY COUNCIL

### At Large Members:

Brenda Aboe, GoForTheDeal.com  
Prince J. Abdullah, Network Administrator  
Richard Adamson, Network Partners, Inc.  
Marvin Almy, Human Services Federation  
Steven Bartels, Woodman Accident & Life  
Patrick Bean, National Research Corp  
John Berge, Lincoln Action Program  
Dan Bernard, Community Member  
Beatty Brasch, Lincoln Action Program  
Loel Brooks, AT&T  
John Brown, Lincoln Electric System  
Sydney Brown, iUniverse. Com  
Terry Bundy, Lincoln Electric System  
Jon Camp, City Council  
Bonnie Coffey, City of Lincoln  
Jonathan Cook, City Council  
Steven Dow, Nebraska Wesleyan  
Steve Duvall, Planning Commission  
Brenda Ealey, Southeast Library System  
Terry Farstad, Unisys Corporation  
Jeff Fortenberry, Sandhills Publishing  
Steve Frayser, Office of Technology Transfer  
Glenn A. Friendt, InfoCure, Practice Works Div.  
Chuck Friesen, Lincoln Public Schools  
Jim Frohman, Dynamic Health Care & Tech.  
Mark Graham, Community Member  
David Hahn, ISPI  
Bob Hampton, Hampton Enterprises  
Chris Heinrich, Community Member  
Kent Hendrickson, UNL Love Library  
Kassandra Hill, Information Services  
Bill Lucke, Utilicorp  
Fred Hoke, Modis, Inc.  
Erik Hubl, Lancaster County  
Howard Huffman, Huffman Engineering, Inc.  
Betty Hutchinson, BinaryNet  
Stephanie Johanns, Alltel Communications  
Ron Kallhoff, Vallis Softward

Gerard Keating, One Oakbrook Terrace  
Dan King, Kenexa  
Alan Koenigsberg, Linweld  
John Kubicek, Community Member  
Yvonne Norton Leung, Consultant  
Terry Lowe, City of Lincoln  
Daniel P. Ludwig, MGT of America  
Tyler Mainquist, MDS Pharma Services  
Ruth Michalecki, Community Member  
Kent Morgan, City of Lincoln  
Michael Obenchain, DancinRabbit.com  
Scott Opfer, City of Lincoln  
Greg Osborn, Computing Extra's Inc.  
Leo Perreault, Alltel Communication  
Nick Petersen, Nebraska Systems  
Kristine Pike, AT&T Wireless  
Steve Reichenbach, UNL Computer Science  
Dave Roehr, Cabela's  
Duncan Ross, City of Lincoln  
Beth Scarborough, Time-Warner Cable  
Tim Schmidt, SI Automated Systems  
Coby Schock, Community Member  
Richard Schoemaker, Pinpoint  
Dianne Sedlar, Nebraska State Patrol  
Bob Selzer, Nebraska Municipal Power Pool  
John Smith, Network Partners, Inc.  
Sheryl Snyder, Community Member  
Dan Staker, HDR  
Doug Thomas, City of Lincoln  
Kent Thompson, Community Member  
Dave Vallis, Vallis Software  
Bradley Walker, nanonation.net  
Walt Weir, University of Nebraska  
Earl L. Wiese, Jr., Community Member  
Dwight Winiger, SBW Consulting  
Michael Winkle, Nebraska ETV  
Ken Winston, Community Member  
Paul Zoz, Bizco Technologies

# **City of Lincoln MAYOR'S TECHNOLOGY COUNCIL**

**Resource Team:**

Carol J. Connor, Lincoln City Libraries

Polly McMullen, Downtown Lincoln Association

Sherrie Hanneman, Lincoln Partnership for Economic Development